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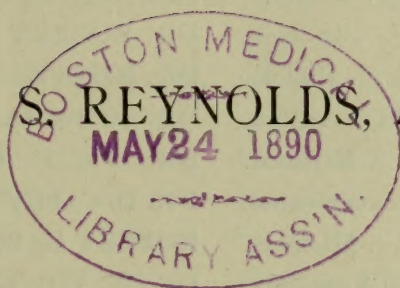
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DUDLEY S. REYNOLDS, A. M., M.D.



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PROGRESS

A Monthly Magazine for Students and Practitioners of Medicine.

"I HOLD EVERY MAN A DEBTOR TO HIS PROFESSION; FROM THE WHICH AS MEN OF COURSE DO SEEK TO RECEIVE COUN- TENANCE AND PROFIT, SO OUGHT THEY OF DUTY TO ENDEAVOUR THEMSELVES, BY WAY OF AMENDS, TO BE A HELP AND ORNAMENT THEREUNTO. THIS IS PERFORMED, IN SOME DEGREE, BY THE HONEST AND LIBERAL PRACTICE OF A PROFESSION; WHEN MEN SHALL CARRY A RESPECT NOT TO DESCEND INTO ANY COURSE THAT IS CORRUPT AND UNWORTHY THEREOF, AND PRESERVE THEMSELVES FREE FROM THE ABUSES WHEREWITH THE SAME PROFESSION IS NOTED TO BE INFECTED; BUT MUCH MORE IS THIS PERFORMED, IF A MAN BE ABLE TO VISIT AND STRENGTHEN THE ROOTS AND FOUNDATION OF THE SCIENCE ITSELF; THEREBY NOT ONLY GRACING IT IN REPUTATION AND DIGNITY, BUT ALSO AMPLIFYING IT IN PROFESSION AND SUBSTANCE."—BACON.

VOL. III.

LOUISVILLE, KY., JULY, 1888.

No. 1

GENERAL MEDICINE.

FŒTAL MEDICATION.

BY
T. M. KYLE,
M. D.
AURORA, IND.

Read to Mitchell District
Medical Society, at
French Lick
Springs,
Ind.,
June 22d, 1888.

By reference to the transaction of the Indiana State Medical Society for the year 1883, you will find an article on this subject which I had the honor of presenting to that Society.

It attracted but little discussion, owing

to the fact that each speaker said: "As there is nothing written on this subject, we are not prepared to discuss its merits." Others said such a theory as herein presented, namely, to give treatment to the intrauterine inhabitant, "will prove a failure."

My object in again bringing this subject to the consideration of this body of distinguished medical gentlemen is, that it is comparatively new as to the literature of the profession. If true, there is an open field inviting the profession to enter and, if possible, sustain more fully *Fœtal Viability* and lessen infantile fatality. What a sad role is presented as we read vital statistics and learn how many children never see the light, while others, weak and puny, survive the variable blight and early fall a ready victim to the acquired tendency from parents. Shall this awful death rate continue? Is there no way to stop this dread destroyer? A life blotted out just at its beginning!

While fond mothers are waiting to give their infants care and protection, she is informed by the attending physician: "Your babe is dead, *still born!*"

Figures cannot estimate the loss to the world and society by the awful death rate. Let us address ourselves to the consideration of this subject. We are deeply impressed by seeking out and putting in force whatever may lessen infantile mortality.

The manner whereby the uterine inhabitant may be influenced by medicine is so well understood, I need not refer to the manner whereby it enters through the mother's blood, and by osmotic percolation enters the fœtal circulation, and thus affects the fœtus by a therapeutic agent essentially the same as after birth.

Prof. Smyth, of London, says in reference to the treatment of the health of the mothers who are *enciente* that it should be prompt and active, that the fœtus may not be effected by disease of the mother. In speaking of intermittent fever he says it should be cured immediately, as it will affect the fœtus, causing it to be weak and feeble, and that by the effect of diseased action in her system she will be likely to abort.

When the paroxysm of fever comes on the beat of the fœtal heart is increased, and if not arrested in a few days will cause the death of the fœtus.

Speaking of syphilis in the married woman he says she should be treated, as it readily affects the fœtus by transmission through the ovum. Should require early medication,

that the foetus may be born vigorous and healthy. Pregnant women should avoid undue mental excitement during pregnancy. There is a great susceptibility to mental impressions, strong emotions. We will see this effect clearly in the disposition of the child. The conditions are so close between the disease of the parents and the tendencies of the child to suffer from like diseases that it scarcely admits a doubt that the one is the result of the other. Not only the physical powers and weakness of the parents are manifested in their offspring, but the moral and intellectual as well.

As we study disease—its forms and actions—how it may be reproduced from one to the other—how the morbid disease of the parent may be manifested in their offspring; a morbid dyscrasia may be transmissible through the spermatozoa and later to the ovum, I am not prepared to say when the foetus is not in some way affected by the morbid dyscrasia of the mother. A proof of this is seen in cases where the mother is suffering from some of the acute and infectious diseases.

For example, a lady in the limits of my practice, who was pregnant six or seven months, was attacked with small-pox. She aborted. The child was covered over with the eruption. Both mother and child died.

The great loss of life from the inherited syphilis is evident to every physician that specific diseases are on the increase. How many young men call at our office for treatment for some form of venereal poison! I have treated, during the last year, one young man, now eighteen years of age, three different times for gonorrhœa. I can call to mind, not long ago, when nine young men were at my office awaiting for treatment for some form of syphilitic disease.

A few weeks ago, while I was treating a young man for gonorrhœa, he got married. He has not returned since. Evidently he is trying the treatment that the hair of the dog is good for the bite.

How can we expect a generation of

healthy children from such a corrupt parentage? Frequent abortions will be visited on the mothers and the dire effects of the parents may be seen in the children. If by vigor of strength they arrive at manhood, we can easily read their history—weak and puny.

In behalf of the millions who are the unwilling sufferers for the variable blight that has fallen on them, I advocate Foetal Medication, if possible to correct the evil during the development of the foetus. Herein lies the benefit; herein is the opportunity of freeing our offspring from the inherited tendency from which so many of the race are suffering.

You ask me, Can the foetus receive treatment previous to its birth? I answer, Yes, through the medium of the mother's blood.

An example, which you are all familiar with: I allude to the oft repeated complaint of mothers of the violent and frequent movements of the child during the last months of utero gestation. How easily are they controlled by a few doses of opium.

I was called some time ago to see a lady who was greatly annoyed at the gymnastic movements of her child. I gave her a few doses of opium. In a few hours she sent for me again. On entering her room she said I had killed her babe, as it had ceased to move, but I assured her that in due time she would be annoyed by the same trouble. Ergot is recognized as a dangerous remedy to foetal viability. Please observe the effects of a high temperature of the mother on the action of the infant heart. Give some form of arterial sedatives and watch the action of the foetal heart.

Sir James Y. Simpson, of London, recommends the alkaline salts to increase placental respiration.

Prof. Reamy says they are of the greatest value in all such cases.

I have spoken before of high temperature, its danger from increase of the beat of the foetal heart, causing death; also from cases attacked with variola during gestation as a

danger whereby pregnant women may lose the products of conception, violent shocks to the nervous system having a tendency to produce miscarriage.

Thus we might go on from one case to another, but you are much more fully acquainted with the nature of those cases than I. If these women escape premature labor and their children are born at full time, we see the child weak and of feeble development, the offspring of parents who are suffering from some of the above causes or some form of wasting disease.

We can read in the physical weakness of many a one in our cities, blighted by the touch of a syphilitic ovum, blasted childhood, frail manhood and tottering old age. There comes an appeal to stop this tide that is sweeping its scourge over society, destroying its hopes of longevity and perfect development by those blights.

The Jewish history and they who gave the world its prophets, its morals and its Redeemer, gave us a history replete how to protect the race from disease.

Thus we see a strong nation, which conquered its enemies, extended its empires, built cities, erected temples and burnished them with gold. The history of Rome is equally as sublime, her people equally as noble. They were frugal, temperate. They marched, they conquered.

As we take a retrospective view of this map,* showing the distribution of still-born in the states of our union, we are astonished at the dark shades and shadows that spread over our fair union. The lightest coloring shows a death-rate of 10 still-born to the 1,000. The darkest shade over 30 to the 1,000; a greater number in the cities, a less number in the country; the greatest among the German people, then Irish next, colored next, and the American last, while infanticide is greater among the colored race. We find the greatest number of still-born to be found in the South Central Appalachian range of our union.

In conclusion, I believe if the profession will fully acquaint themselves with the merits of this subject we will see infantile mortality less, and those children who are the subject of disease—parentally communicated, may be protected from the blight that may fall on them, so when they arrive at the age of usefulness may be a generation of men and women freed from the blight that may have been destroyed by this or some other form of medication, and they may be able to start on the journey of life with a reasonable hope of life and pursuit of happiness.

DISCUSSION.

Dr. E. R. Palmer thought it would be very difficult to decide so nice a point in diagnosis as to determine when the foetus in utero is ill. Yet, in cases of constitutional disease good food and tonics were indicated.

Dr. D. W. Yandell said the reason Dr. Kyle found no literature on foetal medication was because there was no such thing as foetal medication.

Dr. Joseph M. Mathews thought the syphilitized and the tuberculous woman, when pregnant, called for especial and continuous attention, in order to supply material for the nourishment and growth of the foetus, as well as to prevent its inheriting the mother's disease. He thought if the mother could be cured before the time for her travail the child might be born into the world with such vigor and strength as to have a fair chance of reaching years of maturity and usefulness.

Dr. ——— asked Dr. Kyle how he could tell when the foetus needed medication?

Dr. Dudley S. Reynolds said he knew of no reasonable ground upon which to base a hope of so successfully medicating a syphilitized mother as to make it even possible for her offspring to escape an inheritance of syphilis. As to tuberculosis, the treatment of the pregnant woman was to be conducted on her account, and without any reference

*See Map No. 18 of Vital Statistics of United States.

to the prevention of its inheritance by her child. If it could be shown that any kind of medication would prevent the transmission of either tuberculosis or syphilis to the foetus in utero, then we have in that form of medication something more powerful than the world now knows of, a cure of constitutional syphilis, and of miliary tuberculosis, the only transmissible form by heredity.

Dr. Kyle, in closing the discussion, thought Dr. Mathews had grasped his idea, which was to build up weak pregnant women and cure their chronic diseases, that they may the better be able to nourish and carry the foetus to full term.

THERAPEUTICS
OF DIPHTHERIA.

BY

A JACOBI,
M. D.
NEW YORK.

Read to the Philadelphia
County Medical Society.
Stated Meeting, May
23, 1888.

MR. PRESIDENT:

You have conferred upon me the honor of an invitation to make some introductory remarks to your discussion on the treatment of diphtheria. This invitation I was anxious to accept, if

for no other reason but to see the profession of Philadelphia at their home, and at work. That I should bring anything new to you, or striking, I never for a moment believed, since I was ever in the habit of reading your books and journals, and the proceedings of your societies. But it pleased me to infer from the demand that I should appear before you, that I was, to a certain extent considered one of you, and to prove by my willingness to come that I appreciated the honor offered.

When I considered the subject which is to be the topic of your deliberations this evening, and remembered the vastness of its literature, it became clear to my mind that a digest, ever so small, of what has been written, would fill more than many evenings, and still fall short of accomplishing the object in view. I was aware that I must

not come here with literature. You will excuse me, therefore, for only detailing in plain language some of the facts gathered in my contact with diphtheria, these thirty years, and the therapeutical measures which I have learned to appreciate and to practice. Thus I shall not touch upon the large number of panaceas which have ascended like rockets and never were seen again.

Diphtheria is a contagious disease. Severe forms may beget severe or mild forms. Mild cases may beget mild or severe cases. There is probably no spontaneous origin of diphtheria, any more than there is a spontaneous origin of cholera or scarlatina. What has been called follicular amygdalitis (or "tonsillitis") is diphtheria in many, perhaps most, instances. It is seldom dangerous to the patient, because the tonsils have but very little lymph communication with the rest of the body. But the diphtheritic variety of follicular amygdalitis also is contagious. This mild variety is that from which adults are apt to suffer. It made me proclaim the warning that there is as much diphtheria out of doors as there is in doors; as much out of bed as in bed. With this variety the adult is in the street, in business, in the school-room, in the railroad car, in the kitchen and nursery. With this variety, parents while complaining of a slightly sore throat, kiss their children. Wherever it is suspected, it ought to be looked after. Where it is seen it ought to be isolated and treated, less perhaps for the sake of those who are sick, than of those who are in serious danger of being infected. This is the more necessary, as this form is apt to last long and give rise to repeated attacks. But it is not only the mild variety which is liable to last long. Serious, undoubted cases are also apt to last for weeks, and some of them months. As long as they do persist they are contagious.

These reminiscences and quotations from former writings must justify the preëminent place I claim for preventive treatment.

Those sick with diphtheria, severe or

mild, must be isolated. If barely possible, the other children ought to be removed from the house. This can but rarely be done in the homes of the poor, in the densely populated districts. A great charity is still waiting for its consummation, viz., that of erecting buildings, dormitories, and play-rooms for those who ought to be temporarily exiled from their infected homes. A suggestion of mine, before the New York State Medical Society, in its meeting of 1882, resulted in the erection of the Willard Parker Hospital of New York, for the benefit of those suffering from scarlatina and diphtheria. The erection of a sufficient number of temporary homes would be a still greater blessing to the poor, and a greater protection to the public at large. If it be impossible to send the well children away, let them remain outside the house, in the air, as long as feasible, and with open bedroom windows during the night, in the most distant part of the house; during the winter in a lower floor. Their throats must be examined every day, and their rectal temperature taken by the mother, so that the physician may be called on the occurrence of but slight changes. The few minutes spent in this way are amply repaid by the safety they may accomplish. The attendants upon cases of diphtheria must have no intercourse with the well children; though a brief visit of the physician may not render him sick, or dangerous to others, a long exposure affects him or a nurse to a greater or less degree.

The well children of a family in which there is diphtheria, must not go to school or church. Schools must be closed when a number of pupils have been attacked; or, better still, when there is an epidemic, though it may not yet have affected the school children to a great extent; the teachers ought to be taught how to examine throats, and directed to do so every morning, and send home those children who are suspected.

When an attack of diphtheria has made

its appearance, it is well enough to examine the hygienic condition of the house with its deteriorating influences on the general health of the inmates, and to look after the source of the case in the persons of friends, attendants, and help. A family with children ought to insist upon the occasional inspection of the throats of their servants those with chronic pharyngeal catarrh must not be hired. A seamstress, or laundress coming for an occasional day's work, sick nurses, and cooks, ought to be examined from time to time, the more so, the more such people are inclined to conceal slight troubles, for obvious reasons. The opportunities for infection are so numerous that it is impossible to sail absolutely free from it. It is easy to imagine how many cases of diphtheria are liable to be disseminated by teachers, shopkeepers, restaurants, barbers, and hairdressers.

In times of an epidemic, every public place, theatre, ball-room, dining-hall, and tavern ought to be treated like a hospital. Where there is a large conflux of people there are certainly many who carry the disease. Disinfection ought to be forced in regular intervals. In this respect I can but repeat what I said in my treatise (p. 172) and Pepper's *Cyclopædia* (I. 697). Public vehicles must be treated in the same manner after a suspicious case has been carried; that it should be so when a case of small-pox has happened to be conveyed in them, appears quite natural. Livery stable keepers who would be anxious to destroy the germ of small-pox in their coaches, must learn that diphtheria is as dangerous a passenger as variola, and what is correct in the case of a poor hack, is more so in a railroad car, whether emigrant or Pullman. I have seen many cases coming to and leaving the city in them. They ought to be thoroughly disinfected in times of an epidemic at regular intervals, for the highroads of travel have always been those of epidemic diseases. Still, can that be accomplished? Will not railroad companies resist a plan of

regular disinfections, because of their expensiveness? Will there not be an outcry against this despotic violation of the rights of the citizen, the independence of the money bag? Certainly there will be, exactly as there was when municipal authority commenced to compel parents to keep their children from school when they had contagious diseases in their families, and when small-pox patients were arrested because of their endangering the passengers in a public vehicle, or taken to a fever hospital for the protection of their neighbors. In such cases it is not society, or the State, that tyrannizes the individual, it is the individual that endangers society.

To what extent the infecting substance may cling to surroundings, is best shown by the cases of diphtheria springing up in premises which had not seen diphtheria for a long time, but had not been interfered with; and best, perhaps, by a series of observations of auto-infection. When a diphtheritic case has been in a room for some time, the room, bedding, curtains, and carpets are infected. The child is getting better, has a new attack, may again improve, and is again stricken down. Thus I have seen them die; but also improve immediately after being removed from that room or house. If barely possible, a child with diphtheria ought to change its room and bed every few days.

To other rules of protection and disinfection, both private and public, including the prohibition of public funerals, I allude, only for the purpose of referring to the admirable rules published in its *Bulletin* No. 10, of September 6, 1879, by the National Board of Health, and copied in my treatise on diphtheria, New York, 1880, and my article on diphtheria in *Pepper's System of Practical Medicine*, vol. i. p. 698.

Prevention can accomplish a great deal for the individual. Diphtheria will, as a rule, not attack a healthy integument, be this cutis or mucous membrane. The best preventive is, therefore, to keep the

mucous membrane in a healthy condition. Catarrh of the mouth, pharynx, and nose must be treated in time. Many a chronic nasal catarrh, with big glands round the neck, require sometimes but two or three regular salt-water injections (1:130) into the nose, and gargling if the children be large enough to do so. The addition of one per cent. of alum will often be found useful. This treatment, however, must be continued for many months, and may require years. Still there is no hardship in it, and no excuse for its omission. The nasal spray of a solution of nitrate of silver, 1:500 or 1000, will accelerate the cure, and not infrequently has a treatment which was considered obsolete when I was young, been of great service to me. It consists in the internal administration of the tincture of *pimpinella saxifraga*. It is certainly an efficient remedy in subacute and chronic pharyngitis and laryngitis. I generally give it to adults, diluted with equal parts of glycerine and water, a teaspoonful of the mixture every two or three hours, with the proviso that no water must be taken soon after.

Large tonsils must be resected in times when there is no diphtheria. During an epidemic every wound in the mouth is liable to become diphtheritic within a day, and such operations ought to be postponed if feasible. The scooping of the tonsils, for whatever cause, I have given up since I became better acquainted with the use, under cocaine, of the galvano-cautery. From one to four applications to each side, or to the post-nasal space, are usually sufficient for every case of enlarged tonsils or lacunar amygdalitis. It is advisable to cauterize but one side at a time, to avoid inconvenience in swallowing afterward, and to burn from the surface inward. Cauterization of the centre of the tonsils may result in swelling, pain, and suppuration unless the cautery is carried entirely to the surface; that means to say the scurf must be on, or extend to, the surface. Another precaution

is to apply the burner cold, and heat it *in situ*.

Nasal catarrh and proliferation the of mucous and submucous tissue may require the same treatment, but in my experience the cases which require it, are less frequent than in those in which the tonsils need correction.

The presence of glandular swellings round the neck must not be tolerated. They, and the oral and mucous membranes, affect each other mutually. Most of them could be avoided, if every eczema of the head and face, every stomatitis and rhinitis resulting from uncleanness, combustion, injury, or whatever cause, were relieved at once. A careful supervision of that kind would prevent many a case of diphtheria, glandular suppuration, deformity or phthisis.

For its salutary effect on the mucous membrane of the mouth, chlorate of potassium, or sodium, which is still claimed by some to be a specific, or almost so, is counted by me amongst the preventive remedies. If it be anything more, it is in a case of diphtheria an adjuvant. It exhibits its best effects in the catarrhal and ulcerous condition of the oral cavity. In diphtheria it keeps the mucous membrane in a healthy condition, or restores it to health. Thus it prevents the diphtheritic process from spreading.

Diphtheria is seldom observed on healthy, or apparently healthy, tissue. The pseudo-membrane is mostly surrounded by a sore, hyperæmic, œdematous mucous membrane. Indeed, this hyperæmia precedes the appearance of the diphtheritic exudation in almost every case. The exceptions to this rule consist of those cases in which the virus may take root in the interstices between the normal tonsillar epithelia, pointed out by Stoehr but a few years ago. Indeed, many cases of throat disease occurring during the prevalence of an epidemic of diphtheria, are but those of pharyngitis which under favorable circumstances may develop into diphtheria. These throat diseases are so

very frequent during the reign of an epidemic, that in my first paper on diphtheria (August 11 and 18, 1860, *Amer. Med. Times*) I based my reasoning on 200 cases of genuine diphtheria, and 185 of pharyngitis, without a visible membrane.

These cases of pharyngitis, and such of stomatitis and pharyngitis accompanying the presence of membranes, are benefited by the local and general effect of chlorate of potassium. The surrounding parts being healthy or returning to health, the membrane remains circumscribed. The generally benign character of purely tonsillar diphtheria, which is apt to run its full course in from four to six days, has in this manner contributed to secure to chlorate of potassium the reputation of being a ready, *the*, remedy in diphtheria. The dose of the salt must not be larger than 15 grains (1 gramme) for an infant a year old, not over 20 or 30 (1.5–2.0) for a child from three to five years, in the twenty-four hours. An adult must not take more than 1½ drachms (6 grammes) daily. These amounts must not be given in a few large doses, but in repeated doses and short intervals. A solution of one part in sixty will allow a teaspoonful every hour, or half a teaspoonful every half hour in the case of a baby one or two years old.

It is not too late yet to raise a warning voice against the use of larger doses. Simple truths in practical medicine do more than simply bear repetition, they require it. For though the cases of actual chlorate of potassium poisoning are no longer isolated, and ought to be generally known, fatal accidents will still occur even in the practice of physicians. When I experimented on myself, with half ounce doses, thirty years ago, the results were some gastric, and intense renal, irritation. The same were experienced by Fountain, of Davenport, Iowa, whose death from an ounce of the salt has been impressively described in Alfred Stillé's *Materia Medica*, from which I have quoted it in my treatise on diph-

theria. His death from chlorate of potassium induced me to prohibit large doses as early as 1860. In my contribution to Gerhard's *Handbuch der Kinderkrankheiten*, vol. ii., 1878, I could speak of a series of cases known to me personally. In a paper read before the Medical Society of the State of New York in 1879 (*Med. Record*, March 15th), I treated of the subject monographically, and alluded to the dangers attending the promiscuous use of the drug, which has descended into the ranks of domestic remedies; and, finally, in my treatise (New York, 1880) I collected all my cases, and the few then recorded by others. Since that time the recorded cases have become quite numerous, and but a few days ago a few new ones were related before the Practitioners' Society of New York. The facts are undoubted, though the explanations may differ. The probability is that death occurs from methæmoglobinuria produced by the presence of the poison in the blood; though Stockvis, of Amsterdam, has tried, by a long series of experiments, to fortify my original assumption that the fatal issue was due to acute nephritis.

The attempt at forming indications for the treatment of patients with diphtheria—I refuse to say treatment of diphtheria—based upon preconceived or acquired idea as to the nature and causes of diphtheria, are all futile. We know that many cases are undoubtedly of local origin; but there are those in which we require no other proof for its original infectious character than the fact that there is a period of incubation. But all that is indifferent, in view of the fact that the cases we are called upon to treat are, as a rule, or have become, both local and constitutional. It is these we have mostly to deal with.

There is no better proof of non-existence of a specific in diphtheria than the fact that the pharmacopœia has been exhausted to find one, and new remedies legitimate and illegitimate, are being recommended all the time as panaceas.

While there are certain indications resulting from the characteristics common to all, every case must be treated on general principles, which must be applied to the prominent individual features. When there is a high temperature in the beginning, it requires all the tact of a good physician to judge of the advisability of reducing it by antifebriles, such as sponging, warm bathing, cold bathing, antipyrin, antifebrin, or the subcutaneous use of the carbamide of quinia. Convulsions may demand active treatment, such as chloroform inhalations, or chloral hydrate internally or in the rectum. Vomiting, or other cerebral symptoms, may ask for liquids, or smaller or larger doses of opiates. A very quick and feeble pulse may require a few large doses of a heart stimulant, digitalis, strophanthus, or spartein in the very beginning.

Renal complications are frequent and occur at an early time. The majority of cases terminate favorably, in some a large amount of albumin will be eliminated in the course of a few days and disappear shortly. But whether your individual case will be of that nature, you do not know, and in time of danger nothing must be taken for granted. Milk or farinaceous diet, plenty of water, or, better, Poland, Bethesda, Seltzer, Apollinaris, or Vichy, warm bathing, warm feet, a few good doses of calomel, a number of hourly or two-hourly small doses of opium which are better than those of digitalis, and nitro-glycerine will often prove beneficial. If a diffuse nephritis, such as is more frequently met with scarlatina, be the result, it impairs the prognosis and requires further treatment conducted on general principles.

To what extent local treatment, if it be possible to employ to employ it, is effective, can best be seen on external diphtheritic surfaces, thus the cutis denuded by vesicatories, the inguinal regions sore with intertrigo, the vagina, circumcision wounds, or tracheal incisions. I have tried almost everything which has been recommended for these conditions, but am most pleased

with the effect of iodol, or iodoform powdered, or one part with eight or ten of vaseline. Powders of subnitrate of bismuth, boric acid, or salicylic acid with fifteen or twenty-five its quantity of starch have not given me the same satisfaction.

The treatment of diphtheritic conjunctivitis requires also nothing but local treatment. It consists in the application of small ice-bags, or iced cloths which must be changed every few minutes, and the frequent instillation of a saturated solution of boric acid, with or without atropia.

The local treatment of the pseudo-membranes of the fauces is a subject of great importance. To look upon them as an excretion which needs no interference, is incorrect. If it were possible to remove or destroy them, it would be a great comfort; but they can be reached only in certain places, and just in those in which they do least harm. Pseudo-membranes on the tonsils are the least dangerous, for their lymph communication with the rest of the body is very scanty. Thus almost all forms of tonsillar diphtheria are amongst the best benign, at least as long as the process does not extend. Most cases of the kind run their mild course in from five to seven days, and it is just these which have given rise to the many proposals of tearing, scratching, cauterizing, swabbing, brushing, and burning. There are cases which do not show the harm done. The fact is that neither the galvano-cautery nor carbolic acid, nor tannin and glycerine, nor perchloride or subsulphate of iron can be applied with leisure and accuracy to the very membrane alone except in the case of very docile and patient children. In almost every case the surrounding epithelium is getting scratched off or changed, and thus the diphtheritic deposit will spread. Besides, the membrane of the tonsil is changed surface tissue, as it always is wherever the epithelium is pavement, and not deposited upon the mucous membranes from which it might be easily detached. Whatever is done must be ac-

complished without violence of any kind. If nasal injections be found advisable they can be made to wash the posterior pharynx and the tonsils sufficiently, so as to render the special treatment directed to the throat absolutely useless. Besides, it is easier, and meets with less objection, and gives rise to less exhaustion than the forcible opening of the mouth. This is of very great importance, as I shall show in connection with the local treatment of the nasal cavity. Where it is possible to make local applications without difficulty, the membrane may be brushed with tincture of iodine several times daily, or a drop of rather concentrated carbolic acid. Of powders I know only one, the application of which is not contraindicated, viz., calomel. Even this may irritate by its very form. Everything dry irritates and gives rise to cough or discomfort. Whatever has, besides, a bad taste or odor, such as sulphur, iodoform, or quinia, must be abhorred.

For the purpose of dissolving membranes papayotin, or papain, has been employed. It is soluble in twenty parts of water, and may be injected, sprayed, or brushed on. I have used it in greater concentration, in two or four parts of water and glycerine, in the nose, throat, and through the tracheotomy tube, in the trachea. One of the irrepressible drug manufacturers and advertisers pushes the claims of some modification of the drug, which we call papoid. For the same purpose trypsin is preferred by others. The mode of its application appears to be the reverse of indifferent. But lately I have seen, in the practice of one of our best known practitioners, papayotin applied in powder, which resulted in constant irritation of the throat while the patient otherwise was convalescent. The pharyngeal hyperæmia and slight exudation disappeared when mild alum washes were substituted.

Steam.—Its inhalation is useful in catarrh of the mucous membranes, and in many inflammatory and diphtheritic affections. On mucous membranes it will increase the se-

cretion and liquefy it, and thus aid in the throwing off of the pseudo-membranes. Its action is the more pronounced the greater the amount of muciparous follicles under or alongside a cylindrical or fimbriated epithelium. Thus it is that tracheo-bronchial diphtheria, so-called fibrinous bronchitis, is greatly benefited by it. Children affected with it I have kept in small bath-rooms for days, turning on the hot water, and obliging the patient constantly to breathe the hot clouds. Several such cases I have seen recover with that treatment. Atomized *cold* water will never yield the same result. Nor have I seen the patent inhalers do much good.

Still, where the surface epithelium is pavement rather than cylindrical, and but few muciparous follicles are present, and the pseudo-membrane is rather immersed in, and firmly coherent with, the surface—for instance on the tonsils and the vocal cords—the steam treatment is less appropriate. On the contrary, moist heat is liable in such cases to favor the extension of the process by softening the hitherto healthy mucous membrane. Thus it takes all the tact of the practitioner to select the proper cases for the administration of steam, not to speak of the judgment which is required to determine to what extent the expulsion of air from the steam-moistened room or tent is permissible.

Steam can be properly mixed with medical vapors. In the room of the patient water is kept boiling constantly, over the fire place, provided the steam is prevented from escaping directly into the chimney, on a stove (the modern self-feeders are insufficient for that purpose and abominations for every reason), over an alcohol lamp if we cannot do better, not on gas if possible, because of the large amount of oxygen which it consumes. Every hour a tablespoonful of oleum terebinthinæ, and perhaps also a teaspoonful of carbolic acid, is poured on the water and evaporated. The air of the room is filled with steam and vapors, and

the contact with the sore surfaces and the respiratory tract is obtained with absolute certainty.

The secretion of the mucous membranes is sometimes quite abundant under the influence of steam, but still, like that of the external integuments, increased by the introduction of water into the circulation. Therefore, drinking of large quantities of water, or water mixed with an alcoholic stimulant, must be encouraged. Over a thoroughly moistened mucous membrane the pseudo-membrane is more easily made to float, and macerate.

It was for this purpose that pilocarpine, or jaborandi, was highly recommended. Guttman recommended it as a panacea in all forms of diphtheria. There is no doubt that the secretion of the mucous membrane is vastly increased by its internal application, and by repeated subcutaneous injections of the muriate or nitrate of the alkaloid, but the heart is enfeebled by its use. I have seen but few cases in which I could continue the treatment for a sufficient time. In many I had to stop it because after some days of persistent administration I feared for the safety of the patients. Thus, as early as in the meeting of the American Medical Association at Richmond, eight years ago, I pointed out the exaggerations in the statements of Guttman. There will be but exceptional cases in which pilocarpine will be tolerated long enough to do good. It is one of the remedies by which we may cure our case and will kill our patient.

Diphtheria of the nose is apt to terminate fatally unless energetic treatment is commenced at once. This consists in preserving disinfection of the mucous surface. The disinfecting procedure must not be omitted long because of the general sepsis resulting from rapid absorption from the surface which is supplied with lymph ducts, and small superficial bloodvessels to an unusual extent. Disinfectant injections must be continued every hour, for one or more

days. If they are well made, the consecutive adenitis, particularly that about the angles of the lower jaw, is soon relieved and the general condition improved. But there are cases in which not the lymph bodies are the main gates through which the constitutional poisoning takes place, but the blood-vessels only. In the incipient stage of such cases the discharge from the nostrils is more or less sanguineous; in them the bloodvessels, thin and fragile, carry the poison inward with great rapidity.

In a few cases injections are unsuccessful. They are those in which the whole nasal cavity is filled with membranous deposits to such an extent as to require forcible treatment. Sometimes it is difficult to push a silver probe through it. That procedure may be repeated, the probe dipped in carbolic acid, or wrapped in absorbent cotton moistened with carbolic acid of 50 or 90 per cent. After a while injections alone will suffice. But now and then the development of pseudo-membranes is very rapid, a few hours suffice to block the nostrils again, and the difficulty is the same.

The liquids which are to be injected must be warm and fairly mild. Solutions of chloride of sodium, two-thirds of one per cent., saturated solutions of boric acid, one part of bichloride of mercury, 35 of chloride of sodium and 5000 of water, more or less, or lime water, or solutions of papayotin, will be found satisfactory. From the selection of remedies it is at once apparent that the object in view is partly that of washing out, and partly of disinfecting. I have not mentioned carbolic acid, which may be used in solutions of one per cent. or less. Its employment requires care, for much of the injected fluid is swallowed, and proves a danger to children of any age, but mostly to the young.

Most of the syringes I find in my rounds are abominations. The nozzle must be large, blunt, and soft. After having recommended for many years the common hard rubber ear syringe the sharp end of which

was cut off, I now use always a short glass syringe with soft rubber mounting in front.

When the children cannot, or must not be raised, I employ the same solutions from a spoon, or a plain Davidson atomizer. These applications can thus be made while the children are lying down, every hour or very much oftener, without any or much annoyance. The nozzle must be large so as to fit the the nostril. A single spray on each side will generally suffice. I am in the habit of covering the common nozzle with a piece of India-rubber tubing.

For a day or two these injections of fluids or spray must be made hourly. It is not cruel to wake the children out of the septic drowsiness, it is certain death not to do it.

Injections of the nose are oftener ordered than judiciously made. Hundreds of times have I been assured that they had been made regularly, hourly, for days in succession. Still there was a steady increase of glandular swelling and sepsis. I never believe a nurse to have made them regularly unless I see her doing it. They *will* run up their syringe vertically and not horizontally, the fluid *will* return through the same nostril. On the successful injecting or spraying of the nares hangs every life in a case of nasal diphtheria. I have long learned to look upon a neglect to tell at every visit how to make an injection, as a dereliction of duty. This may appear a trifling way, but it is a safe one. The nurse must be made to tell you that at every injection the fluid returns through the other nostril, or through the mouth, or is swallowed.

The procedure is simple enough, and need not take more than half a minute for both nostrils. A towel is thrown over the child's chest up to the chin and the child gently raised in bed by the person who is to make the injection. This person sitting on the bed steadies the patient's head against her chest while somebody else holds the patient's hands. The syringe is introduced horizontally by the person sitting behind the patient and gently emptied. No time must

be lost refilling and attending to the other side. When pain is complained of in the ears more gentleness is required, or the spray, or pouring in from a spoon, or minim dropper even, has to take the place of the injection.

Many sins are committed in even doing this simple thing. The unfortunate little one is made to see all the preparations and is worried and excited, and the necessary gentleness in the proceedings is neglected. The cases reported by me in a discussion on the local treatment of diphtheria before the Section on Theory and Practice in the New York Academy of Medicine, read as follows:

"There were two trained nurses, and two children of six and four years. When I saw the little four-year-old the other was dead. Where did he die? His head between the knees of the trained nurse. They had been told Dr. Jacobi ordered nasal injections to be made every hour in such cases. Every hour the unfortunate boy was lugged out of bed, protesting and fighting, and wearing out his little strength in his battle against the trained brutes; had his head rammed between the knees of one of them who was herself comfortably seated on a chair while the other did the rest; and thus the boy was murdered. When I heard the fearful story from the smiling lips of that person, I begged and pleaded, and showed her how to do it gently. A week afterward the doctor told me that the little girl died between the knees of one of the smiling creatures, and neither of them is in the State prison."

Which is the concentration in which an antiseptic injections should be used? For twenty-five years and more, while employing irrigations and injections frequently, I had used quite weak solutions and felt assured of their efficacy. All at once (when the gospel of the bacteria was being preached) it was claimed that weak solutions were useless and a snare, because antiseptics, and

particularly carbolic acid, would not destroy bacteria and bacteria poisons except in such doses and concentrations as would necessarily destroy blood and tissues first. I felt dismayed, but still continued in my heretic ways, hoping that improved knowledge would finally harmonize theory and practice. So it happened. In the *American Journal of the Medical Sciences* for January, 1881, T. Mitchell Prudden proved that a solution of one-sixteenth of one per cent. of carbolic acid prevents the emigration of white blood-corpuscles under circumstances otherwise favorable to inflammation, and Koch found that though bacteria are not easily killed, their growth is stopped by a solution of one part of carbolic acid in 850, and their activity by one in 1200. These effects are all that is required for practical purposes: thus the frequency of applications is justified by both necessity and safety.

Diphtheritic adenitis, the swelling of the cervical glands near the angles of the lower jaw, to which I have alluded as an ominous symptom, points to nasal and nasopharyngeal infection. The treatment consists in disinfection of the absorbing surfaces.

Direct local treatment of the glands if not entirely useless, is, at all events, of minor importance and efficiency. Applications of one part of carbolic acid to ten of alcohol, irritate both surface and patient more than they can do good. Inunctions may do some good by friction (massage); inunctions with some absorbable material in them may do a little better. The common iodide of potassium ointment is useless; iodide of potassium in three or five parts of glycerine is more readily absorbed; the same in equal parts of water, with a little animal fat, and six or eight times its quantity of lanolin, gives an ointment which is readily absorbed. Iodine is found in the urine within a few hours. Iodoform may be utilized in the same way. Injections of iodoform in ether, which I suggested some time ago, are too painful. Mercurial inunctions, those of blue ointment, require too much time for

any effect to take place. Oleates are too irritating locally; a lanolin ointment would prove more satisfactory.

After all, however, the seadiest method of reducing the swelling of the glands, and improving the prognosis accordingly, is that of cleansing and disinfecting the field of absorption. The rare cases of suppuration in these glands require incision and disinfection. They are as ominous as rare, however. There is but little pus, as a rule, but one or many local deposits of disintegrated gland cells and gangrenous connective tissue. The incisions must be extensive, the scoop and concentrated carbolic acid must be freely used. In these cases hemorrhages may occur, some of them very difficult to manage. I have seen some of them terminate fatally. In these carbolic acid must be avoided. Compression, actual cautery, and acupuncture, have rendered good service. Solutions of iron must be avoided, for the scurf formed is a shield behind which deleterious absorption is going on constantly in such wounds, as it does in the uterus.

Besides sepsis, the great dangers in diphtheria are heart failure and strangulation. The latter has its own indication, to which I shall not allude to-day. Heart failure exhibits itself sometimes quite suddenly, but, as a rule, it is foreshadowed by a gradually increasing frequency, weakness of heart-beats and pulse and the equal length of the intervals between the feeble systole and diastole, and diastole and systole. This equality is always a dangerous symptom. Heart failure is due, besides the influences common to every disease and every fever, to myocardial changes. These may depend on the influence of the septic decomposition of the blood, and the ill nutrition of the heart-muscle depending thereon, or the direct diphtheritic changes of the tissue or both. These changes and dangers set in, sometimes, at a very early period. Thus whatever enfeebles must be avoided. Patients must be spared every unnecessary ac-

tivity. They must remain in bed, without excitement of any kind, take their meals, and evacuate their bowels in a recumbent or semi-recumbent position; crying and worrying must be avoided; the room kept airy, and rather dark, so as to encourage sleep if the patient be restless. In no disease, except, perhaps, in pneumonia, have I seen more fatal results from sudden changes of posture, or from exertion. Unless absolute rest be enforced, neither physician nor nurse has done his or her duty.

The threatening feebleness of the heart yields a positive therapeutical indication. In no disease is the danger greater from the side of the heart, in no disease is the indication for sustaining and strengthening the heart more positive from the very beginning. Digitalis, strophanthus, spartein, besides camphor, alcohol, and musk, must not be postponed until feebleness and collapse have set in. It is possible or probable that they will appear; and it is certain that a cardiac stimulant will do no harm. It is safe, and advisable to use them at an early date. That is particularly necessary when antipyrin or antifebrin is given. A few grains of digitalis in a palatable and digestible form, may, or must, be given daily. When a speedy effect is required, one or two doses, of from two to four grains are not too large, and must be followed by smaller ones. When it is justly feared that the effect of digitalis may be too slow, I give, with or without the former, sulphate of spartein. An infant a year old will take one-tenth of a grain four times a day, as a matter of precaution, and every hour or every two hours in an emergency.

Of at least the same importance as cardiac tonics are alcoholic stimulants. The advice to wait for positive symptoms of heart failure and collapse before the life-saving apparatus is employed, is bad. There are cases which get well after treatment, but we do not know beforehand which they will be. No alleged mild case is safe until it has recovered. When heart failure sets

in—and often it will occur in apparently mild cases—our efforts are too often in vain. Thus alcoholic stimulants ought to be given early, and in large quantities, though amply diluted. There is no such thing as intoxication or danger from it, in septic diseases. A few ounces daily may suffice, but I have seen ten ounces daily of brandy or whisky to save children who had done badly with three and four.

Coffee is a good stimulant for the heart. Camphor may be employed to a great advantage for the same purpose. From five to twenty-five grains may be given daily, as camphor water, or in mucilaginous emulsion, which is easily taken. It does not upset the stomach as ammonium carbonate is liable to do. It may be employed subcutaneously when a rapid effect is aimed at, in five parts of oil, which is milder and more convenient than ether.

But the best internal stimulant, in urgent cases, is Siberian musk, in powders or with mucilage. When required at all it ought to be given in sufficient doses, and at short intervals. When ten or fifteen grains administered to a child one or two years old, will not accomplish, within three or four hours, a return of a more satisfactory heart's action, the prognosis is very bad.

Besides exhaustion at the height of the disease, we have paralysis during convalescence, or intense anæmia long after apparent recovery. This anæmia may be general, or is local, and then mostly cerebral.

Diphtheritic paralysis, though of different anatomical and histological origin, yields in all cases a certain number of identical therapeutical indications. These are: The sustaining of the strength of the heart by digitalis and other cardiac tonics. A child of three years may take daily, for a month, three grains or its equivalent; for instance, one grain of the extract. This is an indication on which I cannot dwell too much. Many of the acute, and most of the chronic diseases of all ages, do very much better by

adding to other medications a regular dose of a cardiac tonic. It is true that it is a good practice to follow the golden rule to prescribe simply, and, if possible, a single remedy only, but a better one to prescribe efficiently. A prescription paper with a single line on it looks well, but a readily convalescent or well man, looks better.

Besides, there are some more indications: Mild preparations of iron, provided the digestive organs are not interfered with. Strychnia or other preparations of nux at all events. In ordinary cases a child of three years will take an eightieth of a grain three or four times a day. Local friction, massage of the throat, of the extremities, and trunk, dry or with hot water, or oil, or water and alcohol; and the use of both the interrupted and continuous currents, according to the known rules, and the locality of the suffering parts, find their ready indications. The paralysis of the respiratory muscles is quite dangerous; the apnoea resulting from it may prove fatal in a short time. In such cases the electrical current used for very short periods, but very frequently, and hypodermatic injections of sulphate of strychnia in more than text-book doses, and frequently repeated, will render good service. I remember a case in which these, and the occasional use of an interrupted current, and occasional artificial respiration by Silvester's method, persevered in for the better part of three days, proved effective.

Chloride of Iron.—I am still, as I was in my first paper on diphtheria, in 1860, an advocate of the internal use of chloride of iron. Its mode of administration I have not changed much these twenty years. In a public lecture delivered before a New York audience, by an European authority, whose name has lately appeared a little more prominently in the newspapers than an American physician would wish, I was highly praised for giving a few drops of the tincture of the chloride of iron a few times a day. This eulogy I have always tried not to deserve, for the efficient method of its administration

is not that. The chloride of iron is an astringent and antiseptic. Its contact with the diseased surface is as important as is its general effect; therefore it must be given frequently, in hourly or half hourly doses, even every twenty or fifteen minutes. An infant of a year may take three or four grammes a day, a child of three or five years eight or twelve. It must be mixed with water to such an extent that a dose is half a teaspoonful or a teaspoonful; a drachm in four ounces allows half a teaspoonful every twenty minutes. No water must be drank after the medicine. As a rule it is well tolerated. There are some, however, who will not bear it well. Vomiting or diarrhoea is a contraindication to persevering in its use, for nothing must be allowed to occur which reduces strength and vigor. A good adjuvant is glycerine, better than syrups. From ten to fifteen per cent. of the mixture may consist of it. Now and then, but rarely, it is not well tolerated either. When diarrhoea sets in glycerine must be discontinued. Still these cases are rare; indeed, the stomach bears glycerine very much better than the rectum. In the latter, the presence of a small dose of glycerine is known sometimes to produce large evacuations, a result appropriated and utilized by an advertising nostrum monger.

In connection with this remedy I wish to make a remark of decidedly practical importance. I know quite well that recovery does not always prove the efficacy of the remedy or remedies administered. But I have seen so many bad cases to recover with chloride of iron, when treated after the method detailed above, that I cannot rescind former expressions of my belief in its value. Still, I have often been so situated that I had to give it up in peculiar cases. These are such in which the main symptoms are those of intense sepsis, I should say such in which the iron and other rational treatment was not powerful enough to prevent the rapid progress of the disease. Children with naso-pharyngeal diphtheria, large

glandular swelling, feeble heart and frequent pulse, thorough sepsis, and irritable stomach besides, those in which large doses only of stimulants, general and cardiac, can possibly promise any relief, are better off without the iron. When the circumstances are such as to leave the choice between iron and alcohol, it is best to omit the iron and rely on stimulants mostly. The quantities required are so great that the absorbent powers of the stomach are no longer sufficient for both.

Nor is iron sufficient or safe in those cases which are preëminently laryngeal. To rely on iron in membranous croup means waste and danger.

Mercury.—The first volume of *A System of Practical Medicine by American Authors*, which appeared in 1885, contains in an article on diphtheria, written in 1885, the following remarks on page 705:

“Not all cases of diphtheria are septic or gangrenous, nor are all the cases occurring during an epidemic of the same type. Some have the well-pronounced character of a local disease, either on the tonsils or in the larynx. The cases of sporadic croup, met with in the intervals between epidemics, present few constitutional symptoms, and assume more the nature of an active inflammatory disease, very much like the sporadic cases of fibrinous tracheo-bronchitis. These are the cases in which mercury deserves to have friends, apologists, and even eulogists. Calomel, 0.5–0.75 gramme (grs. viii–xii), divided into thirty or forty doses, one of which is taken every half hour, is apt to produce a constitutional effect very soon. Such, with minute doses of one milligramme (gr. $\frac{1}{80}$ th) or more, of tartar emetic, or ten or twenty times that amount of oxysulphuret of antimony, have served me well in acute fibrinous tracheo-bronchitis. But the mucous membrane of the trachea and bronchi is more liable to submit to such liquefying and macerating treatment than the vocal cords. The latter have no muciparous glands like the former, in which they are very copious.

And while the tracheal pseudo-membrane, though expelled through a tracheal incision at once, that of the vocal chords takes from six days to sixteen or more for complete removal. Still, a certain effect may even here be accomplished, for maceration does not depend only on the secretion of the muciparous glands, but on the total secretion of the whole surface, which is in constant contact with the whole respiratory tract. Thus, either on theoretical principles, or on the ground of actual experience, men of learning and judgment have used mercury in such cases as I detailed above with a certain confidence."

"If ever mercury is expected to do any good in cases of suffocation by membrane, it must be made to act promptly. This is what the blue ointment does not. In its place I recommend the oleate, ten or twelve minims of which may be rubbed into the skin along the inside of the forearms or thighs, or anywhere else when those surfaces become irritated, every hour or two hours. Or repeated doses will be useful such as mentioned before; or hypodermic injections of corrosive sublimate, in one-half or one per cent. solution in distilled water, four or five drops from four to six times a day or more, either by itself or in combination with the extensive use of the oleate, or with calomel internally. Lately, the cyanide of mercury has been recommended very strongly. I hardly believe that it will work more satisfactorily than any other equally soluble preparation. Within the past few years the internal administration of bichloride of mercury has been resorted to more frequently and with greater success than ever before.

"My own recent experience with it has been encouraging, and so has that of some of my friends. Wm. Pepper gave one thirty-second of a grain of corrosive sublimate every two hours in a bad form of diphtheritic croup, with a favorable result. But in this very bad case, desperate though it was—a child of five years, respiration 70, pulse 160—large membrane 'evidently from

the larynx' had been expelled before the treatment was commenced on the seventh day of the disease. The solution ought to be given in solution of 1:5000 and in good doses. A baby, a year old, may take one-half grain every day many days in succession, with very little, if any, intestinal disorder, and with no stomatitis. A solution of the corrosive sublimate in water is frequently employed of late as a disinfectant. It acts as such in a dilution of 1 in 20,000. As healthy mucous membrane beat quite well a proportion of 1:2000 or 3000, any strength between these extremes may be utilized. A grain of the sublimate in a pint or more of water, with a drachm of table salt, will be found equally good. But it has appeared to me that frequent applications give rise to a copious mucous discharge; hourly injections into a diphtheritic vagina become quite obnoxious by such over-secretion, which ceases at once when the injections are discontinued. Thus, when it is desirable not only to disinfect, but also to heal the diseased surface, the injections with corrosive sublimate appear to yield a result inferior to less irritating applications."

These remarks of 1884 constitute what I consider a great progress over the statements of my treatise on diphtheria, 1880, which are more cautious and negative. Extensive experience with the remedy increased my favorable opinion of its efficiency to such an extent as to induce me to publish a number of cases and conclusions in the *Medical Record* of May 24, 1884.

They have been amply justified by the observations of the last four years, so that I am fully prepared to commit myself to the following statements: My conviction of the utter uselessness of internal medication in laryngeal diphtheria, membranous croup, is strongly shaken. The mortality of 90 or 95 per cent. of the cases not operated upon has no longer existed these five or six years, in my observation. The above figures were by no means taken from small numbers. For since 1860 I have tracheotomized more

than 500, perhaps 600, times, have assisted in as many more operations, and seen at least a thousand cases of membranous croup which were not operated upon at all. During the last six years, I have seen no less than 200 cases, perhaps many more. Amongst them, recoveries have not been rare. In the practice of no less a man than O'Dwyer, I have seen two cases of general and laryngeal diphtheria in the same family which got well without any operative procedure. Such recoveries have taken place in all ages, from four months upward. The uniform internal medication consisted in the administration of the bichloride of mercury. The smallest daily dose was a quarter of a grain (15 milligrammes). Half a grain daily continued through five or six, sometimes eight, ten, or even twelve days, has not been rare amongst children of from three to six years. The doses varied from one-sixtieth to one-fortieth of a grain, and sometimes more. They are given every hour. They require the dilution in a tablespoonful of water, or other compatible fluid, for instance milk, in order to be quite innocuous. They are liable to produce gastric or intestinal irritation. When the latter occurred, it was generally found that by some mistake the solution was as strong 1 : 2000 or 1 : 3000. In the few cases in which it did exist, or was believed to result from the remedy, a few minims of camphorated tincture of opium administered with every dose, for a short period, proved sufficient to check it. The beneficial effect of the remedy depends greatly on the time of its administration. As a rule, such complete stenosis as necessitates surgical interference, develops after days only. The necessity is often obviated by the remedy when given as detailed. When an operation is required after all, the treatment must be continued. I have never since 1863 seen so many cases of tracheotomy getting well as between 1882 and 1886, when the bichloride was constantly used as mentioned. Nor am I alone with these observations. I can name a

dozen of New York physicians, some of whom have often performed tracheotomy, who can confirm the above statements from their own observations. Nor does the opinion of those differ who constantly perform intubation. I know that O'Dwyer, Dillon Brown, and Huber, have come to the same conclusions, the latter having been a successful tracheotomist before he earned his laurels with intubation.

My experience in regard to the efficacy of the bichloride of mercury is mainly gathered in cases of laryngeal diphtheria, and a limited number of fibrinous bronchitis. It is there where it has been particularly effective. Still I must not say that they were localized effusions. These, with us, are but very scarce. Our cases of diphtheritic laryngitis are mostly decreasing, and complicated with either diphtheritic pharyngitis, or rhinitis, or both. Not a few, mainly of the latter kind, exhibit constitutional symptoms, sepsis. But cases of that kind also I have seen getting well. One of the most interesting was that of a girl of seven years, whom I saw a single time in consultation with Dr. J. Anderson. There was nasal and pharyngeal diphtheria, cervical adenitis, and some laryngeal stenosis. I recommended an hourly dose of one-fortieth of a grain of bichloride, which she took for ten days, also nasal injections of the same, one grain to a pint. They were made hourly for many days, and altogether continued for more than a fortnight, for the patient lived so long, and is still alive. She swallowed almost all the nasal injections, and great was my surprise, when after some weeks I received the report of the case and learned that about twenty grains of the bichloride had found their way into the stomach of the little girl. She lived, had but little stomatitis, and hardly any intestinal irritation. If the case does not prove anything else, it proves this, that even desperate cases will get well; this case got well with the bichloride of mercury, and resembles all the other cases in this, that after the rational

and careful administration of solutions of hydrogyrum bichloride, local mercurial symptoms about gums, mouth, pharynx, and intestines are extraordinarily rare in infancy and childhood.

DISCUSSION.

DR. WM. PEPPER:

The evening has been so well occupied in listening to the two important and unusual papers—to me most instructive—that there remains little to say in the way of discussion, save as courteous appreciation of the kindness of our visitors and of our debt to them demands. I rise, then, simply to express our appreciation of the great wisdom of the advice to which we have listened. In regard to the last paper, I wish to add my mite of evidence to the value of the operation introduced by Dr. O'Dwyer. It is destined to fill an important place for these reasons, if for no others: that you can induce parents to assent to intubation, when it is impossible to secure their assent to tracheotomy; that in very young children in whom, as we know tracheotomy is so difficult an operation, intubation can be performed with great facility; and finally in septic cases, here is an operation for restoration of breathing space by means of an artificial air-tube which does not involve an abrasion of the surface to tempt extension of the infectious process.

From the masterly address of Dr. Jacobi, I am sure that every person present has derived much instruction and much pleasure—stamped, as it has been from beginning to end, with the accents of earnest truth, with the richness of practical experience. It is precisely these details to which Dr. Jacobi has called attention, that are of the highest importance in the issue of our cases. If he had done nothing more than warn us of the danger of relying too implicitly upon trained nurses, he would have done a service. As with every new instrument of precision, after its value has been demonstrated, comes a period in which there is a dangerous tendency to rely upon it too exclusively; so with

trained nurses, if we trust too implicitly to their unsupervised discretion, we are consigning our patient to more vigorous, and, therefore, more dangerous ministrations—because equally unskilled—than the untrained solicitude of parents and friends. And this must continue to be the case until a longer and more thorough course of study is insisted upon.

So, too, with the high importance of a radical treatment of antecedent and neglected—because apparently trifling—lesions, which the lecturer has emphasized. It is well for us to bear in mind the warning that tonsillar hypertrophies, nasal catarrhs, and the like may tempt the localization of diphtheria, and I may add of scarlatina and of measles in time of epidemic.

The extreme value of iodoform in local treatment I can confirm. Soluble in ether, miscible with glycerine and with oils, capable of use as powder, it is the best of all local applications, and may be applied to all cases and conditions. I would, however, interpose a mild protest against the too sweeping condemnation of the steam atomizer. Used with that gentleness, so wisely insisted upon, and the confidence of the child obtained, the relief to oppression is so soon recognized that we can secure intelligent co-operation in its frequent and regular use. The problem of internal treatment is the most difficult one, a problem which largely and continually occupies our thoughts. I have been glad to hear Dr. Jacobi's clear and outspoken adherence to the mercurial treatment, although he limits it to a certain group of cases. My longer experience has but abundantly confirmed my early impressions of its value—pre-eminently in laryngeal diphtheria whether primary or descending; and I am constantly impressed with the tolerance of children to the bichloride, and equally to the mild chloride. But I would go further than the lecturer. If in a form conspicuous as a dangerous one, which is usually not primary

but associated with rhinitis and faucitis, this treatment proves efficacious, why is it not equally good where the nasal or faucial disease has not extended into the larynx? I have found cases of nasal diphtheria which were a source of great anxiety yield in a most remarkable way, and it has seemed to prevent the local spread as well as septic infection.

I agree with Dr. Jacobi that it is well to begin treatment with the chloride of iron, and that the association of chlorate of potassium is a matter of comparative indifference, and that large doses should be given at short intervals. But I have not been so fortunate in seeing it well borne by the stomach. When gastric or intestinal irritation manifests itself, it is well to stop the iron abruptly and to substitute mercurials. Or, when in the beginning of a case the glandular involvement, the faucial tumefaction, the constitutional symptoms, give evidence of rapid sepsis, we cannot depend upon iron and must give the corrosive or the mild mercurial chloride at once.

In an address covering so wide a field there is much room for difference of individual experience. In threatened heart failure, I would appeal for the early administration of strychnine, which I place above digitalis or sparteine or ammonia, above everything but alcohol. These are but slight observations on a subject opened with a breadth and discussed with a richness for which we cannot sufficiently express our admiration.

DR. CARL SEILER: I have only to say that in my experience the addition of chlorate of potassium to the chloride of iron has been of great use, although I agree with Dr. Jacobi that chlorate of potash alone is of little use. From laboratory experiments I attribute this to the disengagement of chlorine gas when the two solutions are mixed. In the same way, at the suggestion of Dr. Wolff, I find Labbaraque's solution an efficient disinfectant in the proportion of 1 to 5. I use this as a spray to the nasal

cavities or fauces, and have had excellent results. I might also say that we should have our carbolic acid solution not only saline but alkaline, and therefore instead of chloride of sodium I add borate of bicarbonate. The soothing effect of an alkaline solution is well known, and I think it frees the surface better from secretions. The solution should be of such a strength that neither exosmosis or endosmosis shall take place. I see that Dr. O'Dwyer has added an artificial epiglottis to the tube. It has been the experience of all laryngologists to meet with cases of complete or almost complete destruction of the epiglottis by syphilitic or other ulceration, in which there has been no difficulty of deglutition at all. Therefore, I long ago came to the conclusion that it is not the epiglottis which protects the larynx, but the apposition of the ventricular bands. And I would suggest, though I have no experience with such a device, that if the tubes were so made that the head could slip into the ventricles of Morgagni without interfering with the ventricular bands, there would be no difficulty in deglutition experienced. It is not only in New York, but also in this city that the only operation for opening up the air passages that parents will consent to, is intubation. I recall a very distressing case in an asylum, in which the matron would not consent to tracheotomy until the mother of the child had been communicated with, and while they were hunting the mother the child choked to death. This was before we knew of intubation. That we might have performed at once.

DR. H. R. WHARTON: The hour being so late I must postpone what I had intended to say concerning some of the complications of intubation. As to the calibre of the tubes the fact that children do breathe well with tubes as now made, is sufficient evidence of the correctness of Dr. O'Dwyer's position. Since my experience of this, I am not so anxious as formerly to get in the largest tracheotomy tubes.

DR. E. E. MONTGOMERY: Since August, 1886, I have performed some thirty or forty intubations, having previously done some twenty-eight tracheotomies. Fifty per cent. of the children intubated have recovered. My experience is that this operation largely reduces the necessity for tracheotomy, and I believe that if intubation were done early in every case, tracheotomy would rarely be necessary. I cannot refrain from saying that I feel that in devising and perfecting his operation, Dr. O'Dwyer has been a benefactor to the medical profession and to the human race.

Dr. M. PRICE: In the evolution of steam from lime I have for the last fifteen years depended upon the same method as country people use in the scalding of hogs. Put a few pieces of lime in a bucket with hot water, place a blanket over the bed and let steam pass over the child's head. Soon the child acquires confidence and asks for relief, and will even bend his head down over the bucket trying to get the vapor into his throat.

Now, if every half hour a hot stone or brick or piece of metal be added to the water, it will keep up the heat without any stove or fire being needed in the room. It keeps the room clean and the atmosphere sweet, I have not found so much danger of contagion when lime is used.

I show here a specimen of tincture of chloride of iron in syrup, which is well made and of the proper color. There are very few drug stores where you can get it properly made, and if you don't get the right thing it is of no good whatever. Its greatest good is in its local effect.

DR. SHIMWELL: I have performed intubation sixteen times with seven recoveries. In all there has been immediate relief to respiration. In one case I had to remove the tube twice, and introduce it three times, and perform artificial respiration. In removing the tube post-mortem, I have found it impossible to drag it down through the trachea, so there is no danger of slipping.

Is not the occurrence of substernal respiration-depression rather too late an indication to wait for?

DR. EWIN ROSENTHAL: In the mercurial treatment of diphtheria, I have resorted in two cases recently to the sublimation of mercurous chloride from platinum foil. One died and one recovered. The case of death was almost in extremis when the treatment was instituted.

THE PRESIDENT, DR. J. SOLIS-COHEN: I have listened with pleasure and with profit to both these papers; and with all the study that I have given to this subject, I have gained information to-night on many points. The advice to give early attention to the heart, that when danger already threatens it may be too late to effect anything with remedies, is advice that we should all take to heart. We have been distinctly taught that the prevention of this complication must be from the beginning an integral part of the treatment.

In regard to local treatment my experience has differed from that of our distinguished guest. Where it can be properly applied to the extreme margins of the pseudomembrane I have found the topical use of chloride of iron, by firm and gentle pressure with brush, or, preferably, cotton wad, the most serviceable agent I have used. The drug has an astringent and disinfectant action, and I am satisfied that I have time and again seen it assist the detachment of false membrane, and apparently prevent the extension of the infection. Concerning the value of chloride of iron internally, the importance of large and frequent doses, the advantage of mixture with glycerine to assist its local effect, I can only confirm what has been said. So, too, as to the bichloride of mercury; I am glad to hear its great usefulness emphasized, and, with Dr. Pepper, I would include all forms of the disease in the field of that usefulness.

Empirical observation has long taught us the pre-eminent value of the chlorine compounds in general in the treatment of diph-

theria; and the mercury chlorides, more particularly calomel, however, have always enjoyed a high reputation in the internal treatment of membranous laryngitis. It has pleased me, in these discussions, to hear reasons at least plausibly advanced in explanation of facts in which our forefathers learned and used empirically; this is the true direction of medical progress. The topical action of steam is very important. It has always seemed to me that in the natural course of the disease the membrane is thrown off by an accumulation of fluid beneath it which softens it and secures its detachment. We aim, then, by furnishing artificial moisture, to imitate the natural process of recovery. And this leads me to speak of the value of the vapors from lime in the process of slaking. Using a large wash-tub or wash-boiler, and keeping up a supply of large pieces of lime, we secure an abundant disengagement of the hot vapor of water, carrying up with it particles of lime, which mechanically assist by prying up the edges of the pseudomembrane, and thus favoring the access of the vapor of water beneath it.

There is another method of local treatment which I employed with great satisfaction, more especially in former years, when I saw more of the disease—that is, inhalation of carbolic acid in the spray of a steam atomizer, in very large doses. Twenty to twenty-five grains would be added to the ounce of water, and from half an ounce of water, and from half an ounce to an ounce sprayed into the throat every hour, or even half hour, until commencing discoloration of the urine gave evidence of saturation, when the remedy was to be stopped until the urine again became clear. Under this method I would advise the attending physician to see the child four or five times a day, always having the urine last voided saved for him, and when the olive discoloration was noticed to intermit the carbolic acid. This seemed to me to disinfect the system, and thereby improve the local con-

dition, and, at the same time, to prevent or diminish the danger of systemic sepsis. I was not aware, before to-night, that such small doses of carbolic acid as Dr. Jacobi mentions could be of service.

I must repeat our sincere appreciation of the obligation under which Dr. Jacobi has laid us by his masterly paper. I am also glad to thank Dr. O'Dwyer for his lucid exposition founded on fact, and proved by actual exhibition of specimens, that the small calibre of his intubation tube is amply sufficient for due respiration. My own experience with tracheotomy has led me to favor large tubes, the largest that can be introduced without touching the walls of the trachea. I still believe that I have seen life saved by taking out small tubes and substituting larger ones. And I confess that the small calibre of the tube used was one of the theoretical considerations which I enumerated among the drawbacks to intubation. But facts are stronger than theories, and as the small calibre intubation tube does seem to give air enough, and as enough is all that is wanted, I am ready to profess my satisfaction with its present calibre.

I must ask Dr. O'Dwyer to make clear to us the question as to the impaction of membrane. This is not a mere theoretical objection, but is borne out by experience. Perhaps I have been led to attach an undue importance to the matter by an accident which occurred to me a year or so before Dr. O'Dwyer read his now historical paper before the International Medical Congress at London in 1881. I had been called to a case of membranous laryngitis, and had proposed tracheotomy, which had been declined. As I turned to leave the room the mother called piteously, "O, Doctor, don't leave my child without trying to do something for it." I said to my assistant, "we will try to save this child," and taking a catheter I cut off the end, and passed the instrument into the larynx. The child instantly became black in the face, and there was nothing for it but, without asking any

questions, to plunge my knife into the rachea as the child lay on its mother's lap. I inserted the same catheter through the orifice deep into the trachea, and then we performed artificial respiration; my assistant inflating the child's lungs through the tube with his own breath, and my hands exercising compression of the thorax in respiratory rhythm; and, after a while we had the satisfaction of leaving the rescued child sleeping peacefully with unobstructed respiration. But I confess that this experience cost me some of the most anxious moments of my life, and has left a fear of the danger of crowding down membrane in front of a tube introduced into the larynx, which may, perhaps, make me overanxious.

DR. JACOBI: The slaking of lime has the further advantage that it is the only way to utilize lime. A lime-water spray is useless, but in slaking a large amount is carried up into the air and air-passages.

The suggestion of the President that carbolic acid should be used in spray until discoloration of the urine is noticed, I do not feel inclined to adopt. Diphtheria is the very disease in which no complication should be allowed to exist, and we must not tempt them. A single case in which we should have to blame ourselves for a possible nephritis would, in my judgment, condemn the treatment. Besides, young infants are sometimes poisoned by very small quantities.

DR. O'DWYER: Pushing down of membrane does occur, though rarely. The difference between the liability to the accident in catheterization and intubation, is that the catheter has an open, comparatively broad end, while the intubation tubes are comparatively probe-pointed. One pushes and catches the membrane, the other slides past it. I have crowded membrane down in only two cases out of two hundred sufficiently to produce asphyxia. In those two, on removal of the tube, the cast was coughed out.

If we take away the tube because the child is breathing badly and the trachea is

full of membrane, the child not having the strength to cough it out, the child chokes from the absence of the tube, not from its previous presence. My attention is now being directed to devising a means to get rid of the membrane. I hope to present something practical before long.

Blocking with membrane while the tube is in may occur. Formerly, when the swell of the tube was not so great, it would be coughed out and suffocation may take place. The original tube was better in this regard.

The earlier tubes were made to fit into the ventricles with the idea of permitting the approximation of ventricular bands, but it did not work. It is true that the epiglottis is merely an accessory, but in an intubation case the ventricular bands being held open we have to depend upon it; and that is the reason, the dependence being a poor one, that solids and semi-solids which can go down in mass are better than liquids.

THORACIC MURMURS.

In connection with Thoracic Sounds.

By

JOHN B. ENRIGHT,

M. D.

Read to the Louisville Medical Society, May 31, 1888.

Having already considered the sounds and murmurs emanating from the respiratory organs (see May number of PROGRESS), I now invite your attention to those having a cardiac origin.

A cardiac cycle, like a respiratory one, consists of two acts; the first active, the second passive or more correctly speaking, a period of contraction followed by a longer period of relaxation. We have two heart-sounds—a first and a second—but I hope to show you that cardiac action has nothing to do with the production of this sound that is known as the heart's second sound; therefore, intrinsically speaking, a segment or a number of cardiac segments may act as the hammer, but the power is without that causes the second sound. Let us now examine *seriatim* how these two sounds are produced. In man the cardiac cycles num-

ber about seventy-two per minute. But for the sake of clearness let me consider the cardiac cycles of the horse, which number on an average sixty per minute. At the rate of sixty cardiac revolutions per minute each cycle requires one second of time. Now in respiration we found the respective acts following each other with no interval of rest. In the heart we find a different state of things. There is a period of activity (systole) and a much longer interval of rest, diastole. Now it makes but little difference in considering a cardiac cycle on what part of the circle we begin; but as activity starts in the auricles I shall reckon from the beginning of our auricular contraction. It is at this instant that the four chambers of the heart are moderately filled with blood. The mitral and tricuspid valves are open, have been open since the termination of the preceding ventricular systole, and remain open until the end of the auricular systole under consideration or the beginning of the next ventricular contraction. Were such a thing possible that the cavities of the ventricles were not full of blood at this time, we would have another cardiac sound due to the blood's rushing into the empty ventricular chambers. But as it is the auricular contraction forces the blood through the respective auriculo-ventricular openings, and further and perhaps completely distend the ventricles. So far as our sense of bearing is concerned, the auricular systolic sound is inaudible. This auricular systole takes about one-fifth of the time of a cardiac cycle, therefore in the horse one-fifth of a second. This statement is upon the authority of Carpenter, that prince of observers and king of physiologists.

What follows next? Why the wave of contraction goes on, merges from the confines of the auricles to the ventricles with no interval of time between the ending of the one and the beginning in the other. Now, what does this ventricular contraction do, and how long does it last?

By observation it has been found to take

about two-fifths of the time of a cardiac cycle; therefore in the horse two-fifths of a second. Contracting on the contained volumes of blood, it forces it to seek an outlet. It cannot get back into the auricles for the reason that the respective valves of the auricular ventricular portals during ventricular systole are closed. At all other times, namely, during three-fifths of a cardiac cycle these portals are open. The same forcing power that caused the portals to be closed opens the semilunar valves and permits the column of blood from each ventricle to pass into the aorta and pulmonary arteries. It follows then that the semilunar valves are open during two-fifths of a cardiac cycle and closed the remaining three-fifths.

Now during this ventricular contraction we perceive a sound, and this auditory impression is known as the heart's first sound. What causes this sound? (a question about which a great deal has been written). This and that factor has been advocated as the cause or a combination of factors are said to cause it. Let us see: One will say the heart's impulse against the thoracic wall causes it. This is disproved by the fact that the sound is gotten with all its beauty even when the thoracic wall is removed. We see or else feel a cardiac impulse; we don't hear it. Another, will say, the contraction of the cardiac muscular substance specifically causes it. The man that is able to hear the sound produced by the contraction of the cardiac muscle must have a wonderful ear. If he be able to do this, the contraction of a deltoid or a gluteus maximus must sound like the thundering of artillery. Still another will say, the rush of blood through the narrowed orifices of the aorta and pulmonary arteries cause it. This is mere imagination, for the beginning of each of these vessels when normal is larger than any part of them and fluid forced into smaller lumened tubes never gives appreciable sound. The man that assigns the above as the cause of the sound certainly knows nothing about the philosophy that governs the movements o

fluids. Forced through a small orifice into an enlarging tube always produce sound, but when a fluid is forced into a narrowing or a number of continuously narrowing tubes no appreciable sound is ever produced. Still another will say, the collision of the blood particles on each other cause it. Refutation of this imaginary cause is unnecessary. A fifth will say, the sudden collision or the meeting of the ventricular columns with that in the aorta and pulmonary arteries give rise to it.

If such a thing as an empty space were between these respective columns this might be considered; but as it is there is blood on each side of these valvular curtains, and the instant a crevice is made between the segments the blood of the respective columns mutually, gently intermingle, and the action certainly does not produce the strong prolonged first sound. A sixth will say, the friction of the heart against the parietal layer of the pericardium causes it. Well, in pericarditis with marked effusion we would have no sound, but the sound is there, perhaps feeble, no matter how much effusion. So far this sound has not been accounted for; but the thing of things, the cause of causes that does produce the sound, is the vibrations of the chordæ tendineæ when in a high state of tension by the rush of blood over them.

The cardiac muscular substance is the arm, the blood is the bow; but the chordæ tendineæ are the fiddle-strings that give rise to the music that makes

“Our hearts like muffled drums,
Beat funeral marches to the grave.”

When tendinous or other chords are in a high state of tension and made to vibrate, they produce sound. This sound in air may be modified by even a velvety touch, and in a liquid medium, it is always muffled. So this sound it may be and is strong in proportion to the powers that conjointly forces the blood to vibrate these cords, and at the same time cause them to be in a high state of tension. I believe this to be the only cause of

the heart's first sound, and I hope I have made it clear. This sound is soft (muffled), of low pitch, and ceases the instant the chordæ tendineæ are relaxed.

With this account of the first sound of the heart allow me to remind you that while two-fifths of the cycle is taken by the ventricular systole the auricles during this time are resting, and during the remaining two-fifths the whole heart is at a state of rest. Therefore, it follows that the auricles rest four-fifths and the ventricles three-fifths of a cycle. Now to put these cycles into time, we find (a cycle to a minute) that the auricles act during one-fifth of a second, and rest four-fifths; that the ventricles work two-fifths of a second.

Take any given time, say for example twenty hours, the auricles work four hours and rest sixteen; the ventricles work eight and rest twelve hours. Now as the heart of man on an average beats seventy-two times per minute, it follows that a single cardiac cycle requires sixty-seventy seconds or five-sixths of a second to complete its revolution.

Therefore, applying the above we find one-sixth of five-sixths the time of the auricular systole and $\frac{2}{3}$ ($\frac{4}{6}$) of $\frac{5}{6}$ the time of its diastole; and $\frac{1}{3}$ ($\frac{2}{6}$) of $\frac{5}{6}$ the time of the ventricular systole, and $\frac{1}{2}$ ($\frac{3}{6}$) of $\frac{5}{6}$ the time of its diastole. So far nothing has been said of the heart's second sound. The seat of this sound is cardiac, but its cause is without. Let us see: the aorta and pulmonary arteries contain yellow elastic tissue in their walls. This is a mechanical tissue with elastic properties. When the ventricles contract the ongoing volumes of blood causes the distention of these vessels. The moment this power is withdrawn these tubes rebound on their contained blood. When the semilunar valves are obliterated by disease this mechanical power forces the blood back into the ventricles, but when these same valves are in a state of integrity, this same power spoken of causes the column of blood to close them with a snap as the slamming of a

door. This is what gives rise to the characteristic short sharp quick sound known as the heart's second sound.

This sound is sharp, of high pitch, and its brevity is well known. It is almost unnecessary to say this sound is heard when the heart is in the condition of complete diastole.

With this understanding of the heart's movements and the resultant sounds, let us see what murmurs arise from the different pathological lesions. As *acute pericarditis* masks the true cardiac sounds, let us see what auscultation gives in the different stages of this condition. In the *first stage* of this affection we get a friction murmur due to the dry visceral layer of the pericardium impinging against its parietal layer. Its quality is grating in character, of high pitch and is heard best at the acme of a cardiac contraction. In this stage the heart sounds are normal, but are masked by the murmur.

In the *second stage* no murmurs are heard, but the heart sounds are enfeebled, due to the heart's being squeezed, as it were, by the effusion.

In the *third stage* it may be possible, in some cases, to get a rough friction murmur. In *endocarditis* we get murmurs and they are essentially systolic, unless the disease is associated with valvular lesion when they may be diastolic as well. In this disease the inflammatory exudation is on, in, and beneath the membrane. It thereby thickens it, and as it covers both sides of all the valvular segments they must necessarily be so much thickened as not to open and close kindly.

This thickening may cause a temporary or permanent stenosis of the respective auriculo-ventricular portals. As a result we may get a presystolic murmur, or more correctly speaking an auricular systolic murmur. In this disease, so long as the valves are intact, we will not get any regurgitant murmurs.

The same condition of the aortic and pulmonary valves will give the real systolic murmurs. These murmurs may be so well marked as to almost completely drown the

cardiac sounds. These murmurs are soft blowing ones, but of low pitch, due to the surrounding fluid medium. In endocarditis we get the cardiac sounds, plus the murmurs.

The heart is essentially a double organ, the one side having to do with the pulmonic circulation, and the other with the systemic. I shall, therefore, alone consider the valvular lesions of the systemic side, for the reason that they are of more frequent occurrence: the valvular lesions on the pulmonic side being comparatively rare.

In mitral stenosis we get what is usually described as a presystolic murmur. This is wrongly named; it should be designated an auricular systolic murmur. For it is the hurrying of the blood by the auricular contraction through the narrowed portals with the not well-filled auricular chambers that gives rise to the murmurs.

We determine that this murmur is due to stenosis by the fact that it is heard before the first sound is.

In aortic stenosis the murmur is wholly systolic, providing the integrity of the semilunar valves is preserved, otherwise the systolic murmur may be immediately followed by a diastolic one. How tell mitral systolic from aortic systolic murmurs? My dear thinker you must do this by studying and finding out exactly the two different seats from which emanate the two murmurs spoken of. Study what I am pleased to term medical anatomy. Know where these points are and the way will be clear.

In aortic regurgitation the murmur is always diastolic, never systolic. The second sound is not so well heard for two reasons: First, all of it is not produced, and second, what is present is masked by the murmur. This murmur is apt to last until the next ventricular contraction.

Many other murmurs of cardiac origin are heard as well as adjacent vascular ones in various affections, but my time is up, my space is spent. As a *finale*, the thing of things to remember is that: *A normal thoracic auditory impression is a sound, no matter whether of cardiac or respiratory origin. And an abnormal thoracic auditory impression is a murmur, no matter from whence it emanates.*

TEN
APHORISMS
IN SUMMER
COMPLAINT.

BY

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Abstract of a Lecture Delivered at the Hospital College of Medicine.

Reported for PROGRESS.

1. The practitioner in pediatrics must keep continually in mind the cause of "Summer Complaint"—very high temperature, overfeeding, and micro-organisms. The first enfeebles the digestive organs; the second makes an additional demand upon these functions, and the third find a favorable nidus in the vitiated air, filthy gutters, and in the intestinal ingesta.

2. That bowel disturbances, popularly known as "Summer Complaint," are more liable to attack infants who have reached their second summer is true, but the fact has led to a very popular error. It is not so much due to "teething" as to the introduction of "germs," to which the infant is less liable while nursing.

3. Disinfection of the intestinal tract—the internal administration of antiseptics, arrests at once the progress of these diarrhoeas, and insure a speedy return to health. The putrescent odor of the alvine dejections should guide the treatment.

4. A liberal use of cool water by bathing and sponging, tends to invigorate the infant, and in hot weather prevents indigestion and cures diarrhoeas (thermal). This rule is to be applied to nursing mothers as well as to their infants.

5. The clothing of the infant during the heated term should be in *costumis semi-nudiculis*. A sleeveless shirt of gauze flannel, all wool, should reach from the collar bone to the hips, covering the vital organs. No other flannel is to be worn. Over this a thin loose slip of thin cotton or linen fabric should just reach to the feet, no skirt.

6. Mothers who are nursing must be par-

ticularly careful not to become surfeited with heat, food, or clothing. They should avoid mental or physical excitement, and should take frequent rides with their infants upon cars or boat. A morning drive if taken at sunrise will often dispel approaching illness.

7. All artificially fed babies should have their food sterilized by boiling. Afterwards it should be hermetically sealed until used. This boiling must be made to include all the food and drink taken, and under no circumstances is this law to be disregarded. By attention and compliance with this rule, and proper attention to clothing and cleanly hygiene surroundings—diarrhoeas, summer complaints, and cholera infantum are impossible, and there is *no need of a single instance*.

8. Astringents are of very questionable value in infantile summer fluxes, and mothers should heed the caution to avoid drugs, and especially mixtures containing opium, which, while they may check the bowels, are sure to produce meningitis.

9. Barley water (Robinson's Ground British Barley) slightly salted, with phosphate of sodium is the the best drink for infants who require supplemental or diluted feeding—white of egg to be added if needed for preventing nausea. In acute indigestion the barley water should constitute the *sole* food until restoration.

10. Should an infant be attacked by either diarrhoea or cholera infantum, the physician, and not the druggist, should receive the first notification. Of course I shall be accused of a desire to increase professional business for the doctor, but to my personal knowledge scores of infants perish annually by this error. Druggists are the only persons who possess sufficient mental accumen to prescribe for an infant suffering from cholera infantum without either sight or study. Physicians should refuse to take charge of cases rendered moribund by narcotics—paragoric, laudanum and chalk mixture—as they are sure to die.

GENERAL SURGERY.

TRACHEOTOMY IN MORPHINE POISONING.

BY

BRANSFORD LEWIS,

M. D.,

Assistant Superintendent of
City Hospital.Read to the St. Louis Medi-
cal Society, March
30, 1888.

About four months ago, I read in the *Review*, a short account of the resuscitation of a physician in Vienna, from opium narcosis by means of tracheotomy and forced respiration with a bellows. It seemed to me to be a rational

and feasible procedure, and I determined to try it, should the opportunity present itself.

On the afternoon of March 11, 1888, a young man was brought to the City Hospital in an unconscious condition. It was reported that about an hour previously, in ending up a debauch, he had taken an ounce of laudanum with suicidal intent.

His condition then was bad, cyanosis was marked, the pulse was proportionately weak; and respiration, already shallow, was rendered difficult by the accumulating mucus in the trachea. The pupils were minutely contracted and immobile; extremities cold. The treatment usually carried out in the hospital in such cases was adopted; one hundredth of a grain of atropia, and several syringefuls of whisky were administered subcutaneously, the syphon-tube was passed in the stomach and that organ repeatedly washed out, at first with water, afterward with strong coffee. The flagging respiration was stimulated by douches of cold and hot water alternately dashed over his chest, and to the same end the Faradic current for a time seemed to be of benefit. But notwithstanding our efforts, narcosis became more profound; cyanosis was intensified to a degree which I have seldom seen, and efforts at respiration on his part ceased entirely, so that artificial respiration was substituted, effectually at first, with much less success afterwards. It became evident that unless something radical were done—and that, too, immediately—the patient could not last

And I bethought me of the bellows method. The patient was hastily removed to the amphitheatre, where, with the kind permission of our superintendent, Dr. H. C. Dalton, I performed tracheotomy as rapidly as possible, during which only a gasp was taken now and then, probably two or three to the minute. On separating the severed cricoid a deep inspiration was followed as is usually the case at this stage of tracheotomy, by a considerable interval of quietude. We were about to insert the tube connected with the bellows when a second gasp produced such a shock on the bronchi by the direct impact of cold air on their mucous surface, that violent coughing was set up, expelling with each spasmodic expiration, mucus which had collected in the trachea to a considerable amount. By this means the tube was soon cleared of its contents.

Coincident with the violent coughing, of course, deep inspirations were taken—just the object aimed at, though attained in an unexpected manner, without the use of the bellows; change for the better began almost immediately. The dark purple countenance gradually paled under the more vigorous action of the heart, however paradoxical that may appear at first thought, and efforts to speak evidenced returning consciousness. A piece of moist gauze placed over the tube, acted as a filter to the inspired air. Injections of stimulants—whisky and ether—were continued at intervals, and another hundredth of a grain of atropia was given, after which the patient was removed to his bed and subjected to frequent and vigorous stirring up when respiration was inclined to flag, and it was so inclined for the next several hours. Sleep was not prevented, and he was soon wrapped in its soothing embrace.

On the following morning the tube was withdrawn and the incised membrane and cartilage were sutured, the rest of the wound being allowed to granulate.

I should like to be able to close the record of this case *a la mode* with the statement

that recovery followed without a bad symptom, but I am prevented from doing that by the fact that four days after his entrance into the hospital, the patient became subject to delirium tremens, from which he died thirty-six hours later. The presence of pneumonia or other complication of that sort was definitely excluded by post-mortem examination.

It may be suggested that possibly the patient might have recovered even after several stoppages of natural respiration, such as the one which precipitated the operation, ordinary methods of artificial respiration being employed. I, too, believe that possible, but not probable, a fact but too often demonstrated in cases of that kind.

I have seen not a few patients with vastly less cyanosis, with at times stronger pulse and more vigorous respiration, succumb under the continued use of that treatment.

And the procedure could add no complication to the already critical situation; on the contrary it could only be of benefit by allowing a free vent for the cause of that ominous sign, the tracheal rale, and by shortening and simplifying the channel of communication between the lungs, and that all powerful life-giver "fresh air." As hinted at above, the direct influx of unwarmed air would seem to be no mean factor in conducing to the desired end. Should respiration be re-established, or fail after its repeated re-establishment, it would be easy enough to insert into the tracheal tube, a tube connected with a bellows, by which the lungs could be forced into activity as long as desirable.

In searching for literature on the subject, the *Index Medicus* directed me to only one article referring to it, that of Dr. C. E. Fell, in the *Buffalo Medical and Surgical Journal* for November, 1887. In it the author reports the successful treatment by means of forced respiration with bellows, etc., of a patient who had been poisoned by morphine

for a longer time than the one to whom I have called your attention. The narcotism in the former case seems to have pursued a course not so rapid as that of the latter. The apparatus used was the one usually employed in the doctor's physiological laboratory in the performance of artificial respiration on dogs.

The operation was done on July 24, 1887, prior to the one performed at Vienna, and was therefore, so far as known, the first on record. Since then Dr. Fell has used the treatment with success in two cases, both of which required the prolonged exercise of forced respiration.

In view of the results of the hospital case I believe that morphine poisoning, where other means fail, even though it be impossible, on account of the lack of apparatus, to supplement it with bellows respiration, tracheotomy is a wise and justifiable measure.

THE MISSIS-
SIPPI VAL-
LEY MED-
ICAL AS-
SOCIATION.

The preparations at Saint Louis for the meeting of the Mississippi Valley Medical Association, September 11th, 12th and 13th, indicate an extraordinary interest in the profession of that city. There are to be grand receptions, banquets, excursions, etc.

The Permanent Secretary, Dr. John L. Gray, 70 Monroe street, Chicago, writes that the titles of thirty essays, to be read at the meeting, have already been furnished him. Arrangements have been made for special trains bearing members and their families from Chicago, Indianapolis and Kansas City. Cincinnati, Nashville and Memphis should be included in this list. Of course Louisville will do her duty in the premises. By proper effort this will soon become the largest medical society in the United States, excepting the American Medical Association only.

EYE, EAR AND THROAT.

**RADICAL
CURE OF
PTERYGIUM.**

BY

DUDLEY S. REYNOLDS,

A. M.; M. D.;

Professor of General Pathology, Hygiene and Diseases of the Eye and Ear, in the Hospital College of Medicine, Medical Department of Central University of Kentucky, Louisville:

Read to the Mitchell District Medical Society, at French Lick Springs, Indiana, June 22d, 1888.

Pterygium has been variously described as being cicatricial in its nature, due to small ulcerations in the limbus conjunctivalis, and as a genuine hypertrophy of the conjunctiva. A little attention to the anatomical characters of pterygium, will show that the portion in contact with the fascia is made up almost entirely of abnormal connective

tissue fiber. It will be observed that the pterygium is not so broad upon the under surface as it is externally. There is a well-marked fold running longitudinally along its margins from apex to base. This marks the site of cicatricial tissue, which causes contraction to take place at the bottom of the growth, which seems to be most dense at the limbus of the conjunctiva, whilst that part which seems to overlap the cornea, is formed by a folding of that portion of the anterior elastic layer of the cornea which is involved in the apex of the growth. The capillary blood vessels at the limbus of the conjunctiva, are observed to be much altered. They are irregular in form and size, presenting the appearance of the new capillaries in callous tissue. The amount of connective tissue fiber and the number of wandering cells in the substance of the morbid growth, serve to swell its bulk. If the pterygium be excised, the tendency to cicatricial formation is commensurate with the number of vessels divided. If no infecting material gain access to the wound, a large mass of irregular connective tissue fiber results from the changes which take place in the leucocytes and the wandering cells found in the loose net-work of cellular tissue, always abundant in the ocular conjunctiva.

Arlt and Hasner have given much attention to the study of this subject. They are persuaded that ulceration of the cornea at its periphery, has little or nothing to do with the development of a pterygium. The well known pinguecula, which results from ulceration of the limbus conjunctivalis, is always a purely local affection. It may frequently be observed in persons who have had purulent conjunctivitis with chemosis. In these cases, the loss of surface-epithelium allows the overlapping conjunctiva to become adherent to the anterior elastic layer of the cornea; and when the infiltration disappears as the swelling goes down, the little loops of the conjunctiva which were folded up, are attached to the surface of the cornea, and present the characteristics of what is commonly called pinguecula. This never extends out over the surface of the globe. It does not correspond to the direction of one of the recti muscles. On the other hand, pterygium always overlies one of the recti muscles; it always extends, either from the caruncle or from the sulcus of the palpebral fold; it is always both broader and thicker at its base; thinner and less vascular as it proceeds towards the apex. The apex is always formed by a folding in of the anterior elastic layer of the cornea; and the greater the amount of cicatricial tissue developed at the bottom of the apex, the further will the apex of the pterygium extend upon the corneal surface, the tucking in of the edges being brought about by the contraction of the abnormal connective tissue, which results from an interruption of the passage of the leucocytes through the sub-conjunctival cellular tissue into the organized lymph tubes designed by nature to receive these cells. It is clear, therefore, that pterygium partakes of the nature of a neoplasm. There can be little doubt it begins in the presence of some local irritation, which may perhaps be brought about by the presence of particles of sand, or such other irritating foreign matter, as may be lodged upon the surface of the exposed portion; therefore pterygia

are most commonly observed on the nasal or temporal side, by far the most frequently on the nasal side, owing, no doubt, to the facility with which minute particles of foreign matter gain access to the semi-lunar fold, where the irritation which leads to the flooding of the sub-conjunctival cellular tissue in this region with leucocytes through the dilated capillary vessels, is brought about. Pterygium may, therefore, begin its development in an insidious manner and remain stationary for an indefinite period. Once begun, however, it may be incited to fresh activity in the presence of those causes which originally inaugurated it. Once the anterior elastic layer of the cornea is fairly invaded, the disturbance in the outlet of the leucocytes in the capillary loops of the limbus of the conjunctiva being permanently established, this portion of the growth advances with greater rapidity. It is, therefore, important that some operative interference with the advancement of the corneal invasion, should be instituted as soon as active development has begun, because that portion of the cornea invaded can never be fully restored to its normal transparency; and, so the pterygium should not be permitted to advance into those portions of the cornea through which light is transmitted to form visual impressions on the retina. Nearly all of the operations which have been suggested have proven unsatisfactory. There are two forms of operative interference, however, which may be accounted fairly successful, namely, the complete excision of the whole mass, and the closure of the resulting wound by stitching the normal conjunctival membrane together with fine silk sutures. There should be incisions made at right angles to the line formed by the wound made in the removal of the pterygium, to allow the flaps of the conjunctiva to stretch well over the surface which the morbid growth occupied. It should be remembered that in dealing with the apex of the growth, there must be no mistake about the removal of the whole amount of morbid tissue.

It is better, therefore, to tear off that part which is attached to the cornea by grasping the whole of the pterygium in the limbus of the conjunctiva with Graefe's fixation forceps, and making such tension as will completely tear off from the corneal surface the whole apex of the growth. Another method, and the one which I prefer, is a slight modification of Pagenstecher's operation. Pagenstecher dissects off the apex of the pterygium, and, turning it back, closes the conjunctival wound with sutures. This represents the outlines merely of the operation which I have found most successful.

My plan is to tear off the apex of the pterygium from the surface of the cornea; and if any small portions should remain adherent, to shave them off carefully with a cataract knife. It is better, even, to cut into the proper substance of the cornea, removing a small portion of unimplicated tissue, than to leave even one abnormal connective tissue fiber on the surface; for this will certainly undergo persistent contraction. The next step in the operation is to divide the normal from the abnormal connective tissue fiber along the margins of the morbid growth, down to the base. Then seizing the apex of the growth with the forceps, the loose connective tissue which holds it to the surface of the ocular fascia may be severed with scissors. A free flow of blood should be regarded as auspicious. The conjunctiva may then be stitched together, and a circular incision made both above and below, corresponding to the corneo-scleral juncture, for the distance of a quarter of an inch from the line of union sought to be established by the sutures. Radiary incisions should then be made in the vertical meridian sufficiently to allow the ocular conjunctiva to stretch freely over the surface without having it thrown into folds. Incisions may be made at right angles to the line of union at the base of the pterygium, to relieve tension at this point. The pterygium itself should be allowed to lie undisturbed in its basillar attachments. The sutures will come away

from the conjunctiva in three or four days at most, when good union will be found to have occurred along the whole line, while the pterygium itself undergoes rapid shrinkage, and disappears by the resorption of its constituent elements. This character of operation may be applicable to all forms of pterygia. Having practiced the operation for more than fifteen years, and never having witnessed a return of the growth at the site of its original development, I am persuaded this method is entitled to rank as a radical cure of pterygia.

DISCUSSION.

Dr. D. W. Yandell,

of Louisville, thought

the success of the operation described in the essay might vary with the different materials used for suturing. He would like to know what Dr. Reynolds preferred for that purpose.

Dr. Reynolds answered, carbolized silk.

Dr. S. H. Charlton, of Seymore, thought the medicinal treatment should be kept in mind. He recently saw a case that yielded very promptly to the use of a collyrium of the sulphate of zinc, one grain to the ounce of water, instilled every 4 hours. In two weeks he discharged the patient entirely cured.

Dr. W. R. McMahon, of Huntingburg, had practiced different methods with very unsatisfactory results. He had no doubt the operation described by Dr. Reynolds has some merits and he will give it a trial on the first suitable case. He thinks the anti-septic lotion may modify results. He has not yet seen a case where there was not some manifest disposition of the corneal portion of the growth to return

Dr. Thos. Kyle, of Aurora, has tried excision and strangulation, with varying degrees of success. He will certainly try the new operation.

Dr. Dudley S. Reynolds, being called upon to close the discussion, said: "I do not like any other material for sutures so well as

common white sewing silk, washed in an aqueous solution of carbolic acid, half drachm to the ounce of distilled water. I have tried Professor Hirschberg's fine cat gut, a sample of which he so kindly sent me, through my friend Prof. A. C. Bernays, of St. Louis, and I find it softens and forms large nodules on the surface of the conjunctiva, which require several weeks to disappear by absorption. The silk sutures either cut out and come away in three or four days, or they may be easily removed at any time after 48 hours.

As for the medicinal treatment of pterygia, I think there is no rational plan. The late Professor Bell, of Louisville, used to say of the treatment of Asiatic cholera, "if the patient gets well you may be sure it was not a case of cholera." So with the treatment of pterygia by collyria, if recovery follows, you may be sure it was not pterygium.

INTUBATION

TUBES.

BY

JOSEPH O'DWYER,

M. D.,

NEW YORK,

Read to the Philadelphia
County Medical Society,
Stated Meeting,
May 23, 1888.

[Before reading his paper Dr. O'Dwyer exhibited tubes with a metallic attachment to replace the epiglottis in swallowing, one of them being so arranged with a spring that the finger might be introduced behind

it as an extractor. In order to illustrate through how small a space breathing can occur, he exhibited a specimen from a case in which there had been no choking of voice or other sign of laryngeal involvement.

Many fear that the tube will slip through into the trachea. A tube was exhibited *in situ*, in a three-year-old larynx, showing that this accident cannot occur if the proper size of tube for the age be employed].

The testimony of tracheotomists from the time of Bretonneau, has been uniformly in favor of canulas of large calibre. I have failed to find a single dissenting opinion on

this question, yet very few have given any reason in support of their conviction, or entered into any arguments whatever on the subject, probably because they considered that none were necessary, as it appears so very reasonable that the artificial channel should approximate as nearly as possible to the normal lumen of the air passages.

I will refer to a few of the authorities on this subject before giving the reasons that led to the adoption of laryngeal tubes of so much smaller calibre than those generally used in the trachea.

If a large opening be preferable in one situation it certainly is in the other, the same arguments applying to both.

Bretonneau, for some reason which I have not been able to find, came to the conclusion that the canulas which he first devised were not large enough, and laid down the rule that—

“The artificial conduit should always have at least the normal diameter of the glottis of the subject.”

“Trousseau endorsed this as an excellent precept, which should never be forgotten.”

“Steiner says that as large a canula as possible should be used.”

“The first point of importance insisted on by West, as influencing the result of tracheotomy in croup, is the use of a large canula.”

The author of the article on croup in Holmes's *System of Surgery*, says that—

“As a general rule, both openings in the canula should be sufficiently large to admit as much air as would pass through the rima glottidis in health.”

The following is from Reynolds's *System of Medicine*:

“No tube with less than a quarter of an inch in diameter is sufficient to carry on respiration. At a year old such a tube cannot be introduced into the trachea; it would not be tolerated at two years old, so that at these ages some other means must be looked for to secure a passage for the air.”

The author then discusses the question as to whether the want of success with trache-

otomy in very young children is not due to the inability to secure a large enough opening.

In answer to such assertions as the above, it is only necessary to state that the diameter of the lumen of the trachea at a year old is scarcely a quarter of an inch, and, furthermore, an adult can breathe comfortably while at rest through an opening of this size. I have at present a man under my care who has been wearing a canula in the trachea for the last seven months, the bore of the inner tube being exactly one-fourth of an inch in diameter. During part of this time he was obliged to breathe exclusively through the artificial opening, but then the least exertion, such as walking across the room, was sufficient to induce dyspnoea.

Nature supplied this patient, who is of large stature, with a breathing tube at least seven-eighths of an inch in diameter, and the surgeon submitted one having a breathing capacity of something less than one-twelfth of this. In other words, the area of a cylinder seven-eighths of an inch in diameter is a little more than twelve times that of one a quarter of an inch in diameter.

Had the surgeon who operated in this case placed himself on record, he must have taken extreme grounds in favor of small canulas.

Trousseau advocated larger canulas than were first used, on the ground that in some cases the improvement that at first succeeds the operation of tracheotomy soon gives place to a return of the dyspnoea, and attributes this result to the inadequate size of the canula employed, which does not provide for the permanent admission of a sufficient quantity of air. In illustration of this fact he says:

“Place a quill in the mouths and, closing the nostrils, endeavor to breathe entirely through it; at first you breathe easily enough, but soon your respiration becomes laborious, and at length you are fain to throw away the quill, and with open mouth once more fill the lungs completely.”

I have tried this experiment with a quill,

the diameter of which was three-sixteenths of an inch, and could breathe through it for over five minutes without much discomfort, yet it represents in round numbers only the twenty-second part of an area or capacity of my trachea, estimating the diameter of the latter at seven-eighths of an inch.

If we now construct a canula in the same ratio for a child of five years, the diameter of whose trachea is one-third of an inch, it gives a calibre of three thirty-fourths of an inch in diameter, an opening about as large as the head of an ordinary sized pin. Trousseau's illustration, therefore fails to sustain his argument in favor of larger tubes, as it is certain that canulas as small as this were never used.

A more reasonable explanation of the return of the dyspnoea before the elapse of sufficient time for the extension of the disease, would be the entrance of blood, or the accumulation of secretions, because it occurred in only some cases, while if due to the inadequate size of the canula it should have occurred in all.

In my early experiments with intubation, the tubes had about the same calibre as those generally used for the trachea, but in order to avoid injury in the vocal cords, which I feared more than anything else, it was necessary to give them the oval or elliptical, instead of the cylindrical form. A few of these early forms I here show you. There was ample room, both in the glottis and trachea, for tubes of this size and shape, but I was not then aware of the hour-glass constriction that exists just below the vocal bands until it was demonstrated by the presence of ulceration through the whole thickness of the mucous membrane, corresponding to the long diameter in every case in which the tube was retained for any considerable time.

The defect could be remedied in only one of two ways, viz., either by diminishing the long diameter at the expense of the lumen of the tube, or by giving it the cylindrical form. The latter, by increasing the pressure on the vocal cords, would endanger their integrity,

and I therefore adopted the former, and, as a result, the calibre of the tubes as at present constructed is probably less than half the original dimensions.

The small calibre, consequently, was a matter of necessity, and not of choice, and if the larynx would tolerate no larger without injury, any further argument, as far as intubation is concerned, would be useless. But from the fact that I have failed to find any ulceration at the points above indicated from the tubes as now made, I am satisfied that the cutting down process was carried further than necessary, and if demonstrated, that a larger opening would give better results, this could be obtained without danger to the vocal cords by an increase of the transverse as well as the antero-posterior diameter. The bore of the smallest tube, while still in the cylindrical form, which is intended for infants of one year and under, is exactly one-eighth of an inch in diameter. When we consider the size of the trachea at the same age, the disparity is not very great, and still less when compared with the subglottic division of the larynx, which is the narrowed portion of the breathing tube. This part of the larynx being completely surrounded by cartilage, is not subject to any variations in the normal condition, while the chink of the glottis may be greater or less, according to the position of the vocal cords.

I have found that in the adult the diameter of the lower division of the larynx is from one-eighth to three-sixteenth of an inch less than that of the trachea, which reduces the breathing capacity about one-third. I have not made any similar measurements in children, but by comparing a section from the cricoid cartilage placed beside one from the trachea, it does not appear that the area of the former is more than one-half that of the latter; in other words, the disparity is greater in children than in adults.

In the preceding calculations I estimated on the size of the trachea, simply because it was more convenient, but it is evident that in order to arrive at correct conclusions, we

must compare the lumen of the canula with that of the infraglottic division of the larynx, because the trachea would conduct air to and from the lungs just as well were it no larger than its mouth.

But, as I have already stated, it was not from any such comparisons with the normal calibre of the larynx that the tubes have reached their present dimensions, but from noting the results of pressure on the intensely inflamed and infiltrated tissues as found post-mortem.

After an experience with tubes of various sizes in over two hundred cases of croup, besides other forms of stenosis in children, I am fully convinced that, as at present constructed, they afford ample room for carrying on the respiratory function in the most perfect manner.

When the disease is confined to the larynx and upper portion of the trachea, it is not an uncommon experience after the paroxysm of coughing that immediately succeeds intubation has subsided, to find the little patient breathing so quietly and imperceptibly that it is sometimes difficult to convince the mother, who has returned to the room after an absence of fifteen or twenty minutes, that her child is still living. Such complete freedom of respiration would be impossible were the opening too small.

When the struggle for breath has continued long enough to produce extreme exhaustion, together with more or less atelectasis and congestion of the lungs, this perfect relief does not occur. The same is true after the partial asphyxia induced by prolonged or repeated attempts to insert the tube. Such cases sometimes never rally, although air enters the lungs in the freest possible manner.

If any dyspnoea whatever remain for any considerable time after intubation, or if the respiration be much above the normal in frequency, it indicates the presence of some complication or extension of the disease below the tube. The fact that several times on removing a tube from the larynx I have

found its calibre considerably reduced by firmly adherent secretions, when there had been no dyspnoea to indicate it, is good evidence that there is more room than is actually required for the free entrance and exit of air.

Physiology teaches us that the muscular system is the great consumer of oxygen, and that when this system is at rest the consumption of oxygen is reduced to a minimum. It has been estimated that as much oxygen is consumed during one hour of active exercise as would suffice for four hours in a state of repose, with food, and for six hours without food. On purely physiological grounds, therefore, if only one-fourth or one-sixth of the amount of air is required in a state of rest, a canula bearing this proportion to the normal lumen of the air passages should afford ample room for the perfect performance of the respiratory function without the least effort whatever.

There would be no point in trying to determine through just how small a fraction of the normal lumen of the air-passages it is possible to carry on respiration effectually, if the only object to be accomplished by the artificial channel were to allow the free passage of air to and from the lungs. There would be no room for argument, as there could be no objection to having the canula many times larger than necessary for this purpose, for such exists in the normal condition. I will add further, that were there no abnormal secretions to be gotten rid of, there would still be no reason for difference of opinion on this question.

The only ground left for argument, therefore, is the manner in which the machinery concerned in the removal of secretions is modified or injured by a canula in the larynx or trachea.

The mechanism of coughing, as I understand it, is simply getting as much air into the lungs as possible, condensing it, and allowing it to escape suddenly, on the same principle as the air-gun. To accomplish this, the glottis is firmly closed, coincidentally

with spasmodic contraction of the expiratory muscles, until the imprisoned air is sufficiently compressed, not only to give it power to project any offending substance before it like the ball from an air-gun, but also to increase the friction between it and the lining membrane of the air-passages to such a degree as to scrape off, so to speak, secretions that may be adherent.

Considerable condensation, with great velocity of the expired air are, therefore, necessary to give the maximum expulsive power. The latter without the former would accomplish nothing, because the same volume of air can be driven through the open or half-open glottis just as rapidly as in the act of coughing, without the least power to remove a particle of mucus even from the larynx, much less from the bronchial tubes. This can be demonstrated by trying to cough while retaining the vocal cords in the expiratory position—the lack of power resulting solely from inability to compress the air to any appreciable extent.

Coughing through a canula is identical with this act when performed with a partially open glottis, and the only means left of subjecting the air to any condensation whatever is the much shorter time occupied in expelling it through the same space by which it more slowly entered.

An excellent and forcible illustration of this argument, and one the mechanism of which is identical with that of coughing, is the familiar act of blowing the nose. There is little or no ability to remove secretions from this organ without first reducing the nostrils to a small fraction of their normal calibre, or by momentarily producing complete occlusion, as in closing the glottis, until the air is sufficiently condensed to force the secretions out with it. Very little power can be developed even by closing one nostril and forcing all the air through the other, if normally patulous. If secretions can be removed more effectually from the air-passages through a canula of the dimensions advocated by the authorities already quoted, for the same reason it should be easier to remove accumulations from the nose without compressing the nostrils.

I claim, therefore, that while the artificial opening must be large enough for the perfect performance of the respiratory function, the power to expectorate is still further diminished, and in exact proportion to its increase beyond this limit.

OBSTETRICS AND GYNÆCOLOGY.

PUERPERAL MASTITIS.

BY

T. WERTZ,

M. D.,

OF JASPER, IND.

Read to the Mitchell District Medical Society,
at French Lick
Springs, June
22, 1888.

Mastitis is a painful and distressing affection, complicating the function of lactation, and no means, however irksome, should be spared in our endeavors to ward off an attack. As physicians, we are all familiar with the dangers that

threaten the new-born if abandoned to hand-feeding, and the mamma are not infrequently permanently injured by the supervision of abscess.

By the study of bacteriology we are led to the belief that all the infectious inflammatory diseases have their origin in the action of a substance introduced from without. This morbid agent, we are assured, is, in every instance, associated with microorganisms. It may not be true, as some claim, that there is a special form of bacterium for every disease. Their virulency, perhaps, depends upon their source and not upon their morphology. In health we are constantly surrounded with harmless bacterium which seem to differ from those of diphtheria, gonorrhœa and other allied affections only in their origin. But the infectious property once acquired is capable of being transmitted from generation to generation, even when artificially cultivated. When science shall have made it possible, by direct means, to distinguish the harmless from the pathogenic bacteria, our methods of prevention, no doubt, will be very much simplified. At the present stage of our knowledge we know the enemy only by its results.

In surgery the practice of strict antisepsis has been of such signal benefit in the prevention of suppurative inflammation that lately the same measures are being applied to the prevention of infectious inflammatory affections when no wounds apparently exist. Notably is this true in regard to puerperal

mastitis, which is now being regarded as a purely infectious disease.

In the first place, it is necessary to distinguish between the physiological turgescence of the mamma and parenchymatous inflammation. In the former, two or three days after the labor, the breasts become uniformly large and the flow of milk is established, while the latter usually begins during the second or third week, perhaps, never before the end of the first, and is characterized by the appearance of one or more circumscribed, tender spots, hard and nodulated to the feel.

Assuming the infectious origin of the disease, we are at once shut out from a consideration of the operation of such agents as cold, engorgement or obstructed flow of milk, mental disturbance and the like as primary causative factors. When I was a student, and, indeed, in the text books of recent date, these causes were assigned an important role in the etiology of mamma abscess.

Investigation proves that infection may occur through two channels: Through the lumen of the milk ducts and through abrasions, cracks or fissures of the nipple. Experience and clinical observation teach that the former is the more frequent mode of infection. Escherich and Bumhave demonstrated the presence of pathogenous bacteria in the milk before any inflammation of the gland is noticeable. Cohn found a peculiar streptococcus in cases of non-suppurative parenchymatous mastitis. When the infection takes place directly through the nipple lesion, the *materia peccans* gains access to the connective tissue spaces and phlegmonous mastitis is the typical result. Streptococcus pyogenes is the potent microorganism under these conditions.

While the action of cold, retentive or impeded flow of milk are not primary etiological factors, either certainly may play an important adjuvant part. Under the influence of the bacteria, the secretion is decomposed, loses its alkaline reaction, and

free acids—lactic and butyric—are developed. Galactostasis favors, in this manner, the settlement of bacteria."

According to the above cursory etiological view of puerperal mastitis the treatment is at first preventive, failing in this, the application of curative remedial agents. In all cases of abortion, still-births or primary cause whatsoever, it is desirable to prevent the secretion of milk. I am in the habit of first disinfecting the mamma and at once apply a rib bandage or tight binder. If a roller bandage is used I drop a yard or more over the shoulder and down the back, and apply the bandage from below upward, taking care to draw the breasts well forward toward the median line, as they are covered in and the bandage secured from slipping down by turning up the initial end over the shoulder and stitching it behind and before. This simple procedure is all that is required to prevent the breasts from filling, and is much to be preferred to the purgatives, potassa iodide, belladonna and other clumsy and ineffectual methods usually recommended for attaining the same end.

In the latter months of pregnancy, whenever it is practicable, a regular daily cleansing of the breasts should be insisted on with some antiseptic wash, such as a saturated solution of boric acid or alcohol. In addition to its germicidal properties, the alcoholic wash hardens the skin and, in a measure, obviates the tendency to the formation of abrasions and fissures of the nipple. At the same time the nipple should be protected from contact with the clothing by the use of boric cotton or antiseptic gauze.

During lactation, and especially in the early period thereof, when mastitis is most imminent, the same careful attention to cleansing the breasts should be adhered to; the nipple should be disinfected after each nursing, and the breast protected against the action of cold.

The child's mouth is a fruitful soil for the growth of bacteria, and should be disinfected at least once a day. For this purpose a

wash composed of one part listerim to two of water, with a little glycerine added, serves an excellent purpose.

If lesions of the nipple arise great care is required to prevent infection. The fingers of those who handle the breasts are to be kept scrupulously clean. These lesions, if treated early, may be frequently healed by the application of astringent washes and the gutta percha collodion which forms a thin protective pellicle and has the advantage of not being removed by the act of suckling. This collodion is made by dissolving the gutta percha in a sufficient quantity of chloroform. If deep fissures form at the base of the nipple, and the act of nursing excites great pain, the nursing had better be suspended, the affected breast covered with a thick layer of absorbent cotton and an oil silk protective, and a gentle pressure applied with a bandage, the nipple protruding.

In country practice there is a large class of cases in whom, either from indifference or a want of appreciation of the importance of antiseptics, it is impossible to secure that attention to detail necessary to insure immunity. In such cases, with incipient mastitis, I have been entirely successful with spirits of turpentine as an abortive agent. This remedy should be used in the following manner. On the first appearance of a drawing pain on suckling, or a tender, hard spot be felt in any part of the gland, it should be bathed with the turpentine and covered with a flannel cloth saturated with the same. So far it has never failed, in my hands, in restoring the parts to health in two, or at most, three days.

A rather severe test of the curative power of this remedy is shown in the following case; A few days ago I saw Mrs. A., who had been delivered some four weeks previously by a mid-wife. She had no trouble in her lying in until about five days ago she felt a pain and tenderness in the right mamma, and in the two days preceding my

visit she had a chill and continuous fever following, the pulse was accelerated and there was a circumscribed hard lump in the gland, quite tender and the skin of a reddish blush. She was given a brisk saline purgative, quinine internally, turpentine locally, and in the space of three days all symptoms had disappeared.

It is not to be expected that all cases, advanced as far as this one, would end so happily. I always leave injunctions with the mother and nurse to apply the turpentine on the first appearance of the tenderness, and in the last two years I have been using this remedy have not been called on to lance a single suppurating breast. It does not seem to lessen the secretion of milk, and I have never known any ill effects of the remedy to either mother or child. The only objection to its use is the smell, which is much less objectionable than the disease it releases. It is scarcely necessary to mention that all traces of the turpentine must be washed away before the child is put to the breast. I am not prepared to give an explanation of the *modus operandi* of this remedy, but it is probable it acts as a germicide and solvent.

DISCUSSION.

Dr. G. W. Burton, of Mitchell, thought the paper one of great value. He had not heard of the value of turpentine before, and would have feared the tight strapping employed by Dr. Wertz. As to the cold water, he especially feared its chilling effects, and would prefer to use hot applications. He will try the turpentine.

Dr. D. H. Charleton, of Seymour, has nothing but praise and endorsement for the paper of Dr. Wertz. Few of us know until we have tried it what great results may follow a prolonged and judicious use of cold water. He has seen what threatened to be a phlegmonous inflammation aborted by it.

PATHOLOGY AND HYGIENE.

TUBERCULOSIS
FROM MILK.

BY
LOUIS PARKES, M. D.,
D.P.H.Lond.
Assistant to the Chair of
Hygiene, University
College, London.
British Medical Journal.

That cow's milk is not uncommonly a vehicle for the transmission of infectious disease to the human subject is now well understood. The evidence in support of such a mode of propa-

gation is in many cases incontestable. Enteric fever, scarlet fever, diphtheria, and a disease resembling the foot-and-mouth disease of cattle are known to have been spread by means of the milk-supply. There is one other disease, tuberculosis, in which cow's milk has not been definitely proved to have served as a carrier of contagion; but amongst those who have made a study of the subject the view in favor of such a mode of propagation is regarded as containing the elements of extreme probability.

Cattle are very susceptible to tubercle, and stall-fed dairy cows in towns are not infrequently found to be affected. Indeed, Professor Fleming has asserted that at least 25 per cent. of all dairy cows kept in towns are the subjects of this malady. These animals are stalled day and night in stables often uncleanly or badly ventilated, and they are perpetually being drained of large quantities of milk. Prolonged lactation in the human female is well known to be a frequent precursor of phthisis, and it is not to be wondered at that, under such circumstances, and with the additional factors of confinement, want of exercise, and bad air, cows should succumb to a malady to which they are in a high degree susceptible.

It has been found by experience that the best bred animals, which are also usually the best milkers, are those which are soonest affected. In the early stages the symptoms of the disease are ill-defined, the health of the animal is apparently not interfered with, and the milk secretion is as abundant as

ever. It is not until the disease is well established that nutrition is interfered with; and even then, unless the amount of milk is seriously lessened, the dairy farmer continues to keep the animal in stock. So far as known at present, the milk of tuberculous cows is free from tubercle bacilli, unless there has been—as is sometimes the case—a deposition of tubercles in the glands of the udder.

It would be extremely interesting to know in what percentage of cases the mammary glands are involved in the process of tuberculization, and at what stage of the disease such involvement usually commences. Milk which contains tubercle bacilli, when given to guinea-pigs and rabbits, causes tubercular deposits in the lymphatic follicles lining the intestinal walls, followed by tubercles in the mesenteric glands, peritoneum, liver, spleen, and general tuberculosis (Klein). Milk which is free from tubercle bacilli, although derived from undoubtedly tubercular cows, has not so far been found to be productive of tuberculosis in calves and other animals to which the milk was given.

It may be fairly assumed that in many of those cases of primary tubercular ulceration of the intestines or of tuberculosis of the peritoneum and mesenteric glands (*tabes mesenterica*), which occur in the human subject, the tubercular virus has been introduced with the food, and the absorption of the virus has taken place through some part of the digestive tract. These diseases are usually primary in young children; in adults they are mostly secondary to tubercular disease of other organs, especially of the lungs. On referring to the Registrar-General's Summary it is seen that in the ten years 1871-80 tubercular peritonitis and its allied disease, *tabes mesenterica*, caused amongst children under 5 years of age an average mortality of 1.55 per 1,000 per annum, which approaches closely the average mortality from measles (2.57 per 1,000) in the same period, and is more than twelve times as great as the corresponding mortality from these diseases

of any other age-period of five years, from the age of 5 up to 100. Primary tubercular disease of the lungs in children under 5 years of age is a comparatively rare event. The average annual mortality from phthisis of children under 5 years for the decennium 1871-80 was only 0.77 per 1,000, and possibly some of the cases registered were really secondary to primary tuberculosis of the abdominal lymphatic system on young children, is at once seen from these figures. In the matter of dietary there is one great distinguishing feature between this age period and all others. Under 5 years of age, milk—usually unboiled—forms the staple food of children.

Whilst not denying that the tubercular virus may find other means of reaching the digestive tract than through unboiled cow's milk, it appears to me that there are no sufficient safeguards in the management of town dairies to warrant us in assuming that milk from cows in an advanced stage of tuberculosis has no chance of being mixed with milk of other healthy cows. In every dairy of any size there will probably be tubercular cows, some of them, perhaps, with tubercular deposits in the udders; and as it is the common custom with dairymen to mix together the milk yielded by different cows, it is not too much to assume that tubercle bacilli may be widely distributed in the milk supply of any town. It has been said that the tuberculosis of cattle is not the same disease as the tuberculosis of man, and that the absence of any proof of the human variety having ever been dependent upon ingestion or inoculation of the virus of the bovine variety tends to strengthen such a belief. To this it may be replied that the bacilli of bovine tuberculosis are identical—according to all bacteriological methods at present known—with those found in tubercular formations in the organs of man, and that although the disease presents anatomical differences in man and cattle, these differences may be explained as being due to differences of soil in the human and

bovine tissues, the bacilli ingrafting themselves in those tissues which present conditions most favorable to their growth and development. Secondly, absence of proof may only mean want of observation or recorded data and cannot be held to imply that at no future time will satisfactory evidence of the dependence of the human disease upon a bovine source be brought to light.

Having regard to all these considerations, surely the time has arrived when a radical change in the present methods of milk production and milk consumption is urgently needed. In the first place it should be rendered illegal for cows known to be suffering from tuberculosis to be kept in stock by dairymen and farmers for milking purposes; and, secondly, in no household should unboiled milk be consumed, more especially by children. No other animal food is consumed by civilized nations in an uncooked state; and by the light of our recently acquired knowledge it would appear that there is as much, or more, danger connected with the practice of drinking unboiled milk as of eating raw flesh.

Exposure to the heat of boiling water for five minutes destroys the life and action of the tubercular virus (Klein); and the same is true of the other specific disease poisons. By such simple means, then, is it possible to guard against an ever present source of danger, as well as to obtain protection from those possibilities of the introduction into our bodies of the viruses of enteric fever, and the like, which the experience of past epidemics has taught us to be latent possibilities in milk, with powers of development at the most unexpected periods? If medical practitioners generally recognized the importance of these views, and were careful to enforce them upon those entrusted with the care of delicate children of scrofulous diathesis or with hereditary tendencies to tubercle, a commencement would be made in the right direction, which would gradually extend itself through all classes of society.

BOOKS AND PERIODICALS.

TRANSACTIONS
OF THE NINTH
INTERNATIONAL
MEDICAL
CONGRESS.Edited for the Executive
Committee,
BYJOHN B. HAMILTON,
*Secretary General.*Vol. I. II. Washington, D.C.
1887. Octavo. Pages, 652.

This work is handsomely printed on heavy paper, and contains the official record of the general sessions of the Congress, beginning on the morning of September 5, including every detail of the proceedings up to the time of final adjournment. Following

this is a list of accredited delegates to the Congress from the Argentine Republic, Austria, Hungary, Belgium, China, France, the German Empire, Great Britain and the colonies, Australia, Canada, India, Italy, Japan, Mexico, Netherlands, Roumania, Russia, Spain, Sweden and Norway, Switzerland, Turkey, Syria, the War, the Naval, and the Marine Hospital Service of the United States. Following is a list of members alphabetically arranged. The proceedings of the sections begins in regular serial order on page 156, the first section being devoted to general medicine, presided over by Prof. A. B. Arnold, of Baltimore, whose opening address discusses the practice of medicine in general. The address is brief and pointed, and was followed by an essay on the pathogenesis of yellow fever by Prof. Alvarado, of the National School of Medicine, Mexico. Prof. Alvarado shows himself in this address to be a man of more than average ability. He discusses from a scientific and practical standpoint, the most plausible of the different theories concerning the origin of the fever and the manner of its development in both the inferior animals and man. At the conclusion of this paper, Walter B. Geikie, M. D., Dean of the Trinity Medical College, Toronto, read a carefully prepared and very creditable essay on croupous pneumonia, as it is observed in different parts of Canada. This paper was somewhat extensively dis-

cussed, and concluded the first day's work of the section.

Did space permit, it might be profitable to follow out further in detail the very creditable collection of essays comprised within the remaining portion of this volume.

M. Pasteur's treatment by vaccination is the subject of a carefully prepared essay by Dr. W. M. Whitmarsh, of London. The whole of the work done at *l'Ecole Normal*, is explained, and much of the grounds for criticism removed.

Volume two opens with the proceedings of the Third Section; Military and Naval Surgery and Medicine. It is in uniform style with the first, and contains 914 pages.

The Secretary General of the Congress informs us there are to be three more volumes, all of which will be completed and ready for delivery before the middle of July. The printers, William F. Fell & Co., 1220 Sansom Street, Philadelphia, inclose a slip announcing that the whole series of volumes may be handsomely bound in cloth at 60 cents a volume, or in morocco at \$1.00 per volume, with the seal of the Congress on the side in gilt, and the names of the sections on the back in gilt. Persons sending their volumes to be bound will have to pay their own expressage. Remittances may be made by postal money order, postal note, or by check. Estimates of the costs of reprints, with or without covers, will be sent on request. The reprints, however, cannot be supplied until after the completion of the last volume of the transactions of the Congress. The work is of such high character as to be of permanent value; and, as we are informed, a limited number of extra copies are to be printed to supply the demand of those who were not fortunate enough to be present and participate in the work. We doubt not a large number of the profession will be prompt to send \$10.00 to the Treasurer of the Congress for a full set of the transactions. Such as may desire to avail themselves of this should send the money to Dr. E. F. S. Arnold, Treasurer, Newport, R. I.

CORRESPONDENCE AND SOCIETIES.

LONDON

LETTER.

By our regular correspondent,

ALFRED S. GRUBB, F. R.
C. S., M. R. C. P.,

LONDON.

It is not generally known that in addition to the numerous and varied licensing bodies of this country, the Archbishop of Canterbury possesses the

power to confer the title of doctor of medicine as well as in the other departments of university education. This power is rarely exercised, and then only in favor of distinguished individuals who have to pay up pretty liberally for the honor—some £50 or £60 in fact. Some ungrateful recipients have been ill-advised enough to cant at the price, as though an Archbishop could stoop to discuss questions of pounds, shillings and pence. His grace, it appears, does not pocket any part of the fees himself, so they must be absorbed as perquisites by venal secretaries and underlings. The diploma is not recognized by the State, and does not confer the right to practice. If it does not become retinet it will probably be extinguished and another interesting piece of antiquity will have disappeared.

There was quite a commotion recently in the medical world in respect to an alleged breach of faith on the part of one of the examiners here, who, it seems, in his anxiety to see his pupils succeed (for he was likewise professor) imparted to them such information as to the questions to be put at the forthcoming examination as enabled them to show off to unusual advantage. The facts leaked out and an enquiry was ordered, but before any decision could be arrived at, the gentleman incriminated sent in his resignation. He is also examiner on several other boards, and makes a very large income out of the fees so derived, but it is extremely probable that under the crisis, he will also find it necessary to extend his resignation all round. It is a great pity for the gentleman is an amiable, accomplished and popular professor, and his only offence was that he allowed his zeal

for his pupils to outrun his discretion. Had he been possessed of a little more tact, the disaster might even then have probably been averted.

The Apothecaries' Hall has opened its portals to the ladies after an obstinate resistance of many years duration. Whether this result be due to the blandishments of the female representatives of the lady students, or to a more prosaic consideration of dollars, it is hardly possible to say. In any case ladies can now be made apothecaries *à volonté*. The law is now the only liberal career which remains closed to them, and it is very probable that before long the doors of the Inner Temple will be forced, and the right accorded to them to wear the wig and carry the traditional blue bag. The latter will have the advantage of matching the not less traditional blue stocking.

At a recent meeting of the *British Gynecological Society*, Dr. Fancourt Barnes showed an individual who appeared to have been brought up and treated (to some extent) as a woman under a misapprehension. Although at first sight the external genitole presented the appearances which we usually associate with the female sex, a closer examination revealed the existence between the pseudo, labrá majora of a well formed, if diminutive penis, with á preface and a defective urethea. In fact it was evidently a case of hypœpadics. Notwithstanding the weight of the evidence in favor of the male sex, opinions were tolerably divided and it was proposed, as a *pisal-ler*, to decide the matter by putting it to the vote. Some of the fellows seemed to prefer passing the hand into the rectum to search after a possible uterus or ovaries, but the suggestion was (fortunately for the patient) discountenanced.

The patient was eighteen years of age, and was the third of twelve children. Careful inquiry elicited the fact that the last child also presented some abnormality of the sexual organs, and on examining the child in question, some two years of age, an exactly identical condition was found, although the

parents in the exercise of their discretion, had decided to bring up this one as a boy, for reasons best known to themselves. The existence of two such deformities in the same family is certainly remarkable, especially when one bears in mind that several healthy and well formed children were born in the interval. Mr. Tait insisted on the general advisability, in cases in which any doubt exists as to the sex, of bringing up the children as males. Such individuals generally belong to the male, and in any case less harm is done than when a contrary course is followed.

Dr. de Havilland Hall called attention at the clinical society to the great benefit to be derived from swabbing out the throat with a strong solution of cocaine, in cases of parenchymatous tonsillitis. He formerly used the spray, but finding that its use favored the supervention of toxic symptoms, he has latterly applied the solution with a brush. The treatment does not, however, afford the same relief in the follicular form of the disease.

Mr. Lawson Tait reports a very remarkable case of a woman who was twice the subject of rupture of a tubal pregnancy. The patient was sent to him in the first instance in May, 1885, with a history of ill health dating from the preceding Christmas. She thought at the time that it was due to pregnancy, as she had not menstruated for three months. She lost blood, however, on April 2, again in May, and on the latter occasion she suffered a good deal of pain. On May 9, she had an attack of pain, fainting and vomiting. It was diagnosed as a case of rupture right tubal pregnancy, and successfully operated. Eighteen months later she was confined of a child at term after a normal labor. Fifteen months after her confinement she again became pregnant, but did not experience any symptoms rendering it necessary to call in medical assistance. On March 9, she suddenly became faint, with severe abdominal pain and symptoms of internal hæmorrhage, from which she died before any operation could be

performed. At the autopsy the cause of death was found to be hæmorrhage due to rupture of an interstitial pregnancy on the left side, at about the fourth month. Mr. Tait took occasion to remark on the fact that interstitial pregnancies generally ruptured at a later period than tubal pregnancies. He also took advantage of the opportunity to criticise the accuracy of diagnosis in the cases alleged to have been cured by electricity. He pointed out that in all his large experience he had only been called to one case of retopic pregnancy prior to the period of rupture, and argued that as a rule neither the symptoms nor the signs of extra uterine were such as to allow of a positive diagnosis, prior to rupture. Attending to the pathology of this abnormality he said that rupture of tubal pregnancy must take place either with the peritoneum, when a fatal result was practically unavoidable unless an operation was performed, or the cyst might rupture into the cavity of the broad ligament. In the latter case the fœtus might continue to develop and so reach a period of viability.

Mr. R. Clement Lucas recently read the notes of a case of tumor of the right ovary in a child aged seven, associated with precocious puberty. The child had menstruated, the pubes were covered with hair, and the breasts were well developed. The tumor was removed by operation, and the child made an excellent recovery, after which the signs of puberty gradually receded. Mr. Howard Marsh contested the association of precocious puberty with ovarian tumors in children, and quoted the case of a child of eight on whom he had operated, and in whom no such precocity was present. He suggested that it would be interesting to collect a number of these cases with a view to defining what relationship existed between the two.

At the medical society Dr. Beeson showed a curious case of functional contraction of the right hand in a lad, following injury. The flexion, which came on gradually shortly

after the accident, was followed by a total anæsthesia up to the shoulder with loss of muscular sense. The movements of the arm and forearm were, however, intact. Such cases are not very rare, and possess a peculiar and special interest as bearing on the representation of such symptoms after shock or injury in railway accidents.

We have at last secured the appointment of a Royal Commission to inquire into the question of higher education in the metropolis and incidentally into the alleged grievances of London medical students who, with the same curriculum and the same expenditure of money, time and brains, find themselves handicapped in after life by the non-possession of the title of M. D., to which the English public has come to attach a fictitious importance. Curiously enough not a single medical man has been placed on the board, but every facility will be afforded to teachers and others to lay their grievances before the board. If some practical scheme for conferring the M. D. on equitable terms to London students should become a *fait accompli*, a great step will have been taken toward obtaining that uniformity of qualification—at any rate in name—which is the utopia of medical reformers in this country.

MITCHELL
DISTRICT
MEDICAL
SOCIETY OF
INDIANA.

Official Minutes of the
Meeting at French Lick
Springs, June 21 and
22, 1888.

BY

G. W. BURTON, M. D.,
Permanent Secretary.

Mitchell District
Medical Society met
in sixteenth annual
session in the Pavilion
at French Lick
Springs, June 21,
1888, at 2 P. M.

G. Q. Orvis, M. D.,
the President, called
the society to order.
Prayer was offered by
Dr. Edmund T. Per-

kins, of Louisville. Minutes of the fifteenth annual meeting read and approved.

Dr. M. F. Gerrish, of Seymour, was appointed chairman of the Committee on Enrollment.

“Placenta Previæ,” Dr. H. M. Smith, of Vincennes, was read by the Secretary, and discussed by Drs. Wathen, Hon, and McMahan, and then referred to the Committee on Publication.

“The Diagnosis and Treatment of Hemorrhoid,” by Dr. C. W. Murphy, of Salem, was the second paper read before the society. Discussed by Drs. Mathews, Cook and McMahan.

EVENING SESSION.

Prof. D. W. Yandell delivered a public address on “Temperament.” That it was appreciated we have only to say that the profession and laity were all present and gave the closest attention. A synopsis of the address could not be given in a report like this.

SECOND DAY.

At the opening of the morning session the president appointed a Committee on Nomination and time and place of next meeting.

A most excellent paper on “Villous Tumors of the Rectum,” with specimen, was read by Dr. George J. Cook, of Indianapolis. Discussed by Drs. Mathews, Wathen and Murphy.

A paper on “Foetal Medication” was presented by Dr. L. M. Kyle, of Aurora, that elicited a lively discussion by Drs. Yandell, Wathen, Charlton, McMahan, Wertz, and others.

AFTERNOON SESSION.

Committee on Nominations reported as follows:

President—Dr. J. R. Simpson, Bloomington.

Vice President—Dr. W. R. McMahan, Huntingburg.

Secretary—G. W. Burton, Mitchell.

Next meeting December 27 and 28, at Seymour, Ind.

“Some Points in the Management of Stricture of the Urethra” was the title of an admirable paper by Dr. E. R. Palmer, of Louisville. Discussion by Drs. Yandell, Murphy and Cook.

“The Radical Cure of Pterygium,” by

Dr. Dudley S. Reynolds, was the next paper. Discussed by Dr. McMahan.

"Puerperal Mastitis" was the title of a good paper by Dr. T. Wertz, of Jasper. Discussed by Drs. McMahan, Kyle, Charlton, Gast, Hon, and others.

At the evening session President Orvis delivered an address on the

PROGRESS OF

MEDICAL SCIENCE.

He said: We live in an age that is progressive. In the many branches of industry and science, that are necessary for the complete working of the world, all are making gigantic strides toward perfection, which point, of course, will never be reached, for the advancement of one branch calls for new methods in the other. So the wheel of industry rolls around, a new spoke being added at each revolution; new material being called for and furnished by the fertile brain of man in each particular line. The science of medicine has not lagged in this strife, nor has its workers lacked energy or talent. On the contrary they have outstripped the workers of any other branch, and placed their beacon light farther up on the mountain side where it shines with the brightest glow, and show in their well trodden pathway the broken barriers of more complexities that have been overcome, than all of the other branches combined.

It is unnecessary for me to go back and rehearse matters of history and familiar to you all, about our predecessors, Aesculapius, Hippocrates, Aristotle, Galen and Harvey, and their discoveries. No doubt you are all better acquainted with those facts than I, but it would be well for us to think of the difficulties that had to be overcome, and the means at their command for so doing, to make our subject complete. The highest barrier that had to be surmounted by them was superstition of the masses for whose benefit they were striving. It was strongly fortified by the then prevailing ideas of religion. The fortresses manned by the bigoted

teachers of that religion, who foresaw what had come to pass, the downfall of their temporal hold upon the masses by the promulgation of the ideas of these great benefactors of the human race. The first point to be gained by the true physician is the longevity of life. Secondly, to render that life physically comfortable, or as near so as possible, when called upon for aid.

The means at our command are numerous, but perhaps not more so than they were in bygone times, but differ in quality to mode of administration and action. The practice of the Chinese physician is perhaps a fair sample of what the work was in former times, when there was no progressive spirit nor any stimulus to it. It shows by comparison what modern research has done for the art.

Many years ago Malthus, in one of his noted essays showed the dangers of the people to be in too rapid an increase in the population, while there would be a constant diminution in production, and that a famine was imminent, yea necessary; at no distant day, to equalize the supply and demand by starving to death a few millions that the remainder might live. But in these progressive times the problem is reversed, and now the ingenuity of man is taxed to its utmost to consume each year's productions and make room for the next.

In fact the agricultural and mechanical branches of industry have so perfected the schemes and appliances for producing nutriment for the physical man, made life-sustaining so easy that an earnest appeal comes up to the doctors from the laity to make life as long as possible. And now instead of the horrible proposition of Dean Swift being entertained (that of putting infant's flesh upon the market for food), the more humane proposition comes before us of how to save the little innocents, and how to make them physically perfect so they may replenish and increase the numerical ranks of mankind.

Medical science is divided into several branches, the first, and a very important

one, being preventive medicine. That there has been great progress made in this field of our professional work is very evident, for we know that several years ago small-pox was a scourge much dreaded, and doctors had nothing at their command with which to successfully combat it. But now, when we can bring into use vaccination, there is no excuse for a single death report being recorded as caused by this scourge. It is only the wilful neglect of the law-making bodies of civilized countries that leaves the least vestige of the terrible malady within their limits. Isolation and antiseptic measures as now practiced have relieved the masses in great part from the fears of measles, scarlatina, diphtheria and typhoid fever. The work of Pasteur, though perhaps not yet perfect, is assuaging the fears of hydrophobia and cholera, and will in time conquer these dreadful maladies. What is needed now to perfect these hygienic measures is the coöperation of our law-makers, and soon, instead of a death-rate of thirty per thousand inhabitants, we would reduce it to the same per centum as that of our prison and almshouse population, which is three per thousand, this population being compelled to adopt the most progressive ideas of hygiene. Our advanced hygienic methods not only prevent high death-rates, but do much to make the sufferer comfortable while regaining health, and add no little to the enjoyment of those whose physical condition is of the best. In calculating the wealth-producing power of a state or nation, a comparison must be made of numbers able to work and those dependent upon the producers, and if hygiene as now practiced reduces the latter number, then we may claim for it great progress.

The obstetrician, in his particular line, has done much to mitigate the dread and suffering of the normal function of child-bearing, and well deserves the silent thanks he gets from the mothers of the civilized world. The terrors of puerperal fever, post partum hemorrhage and lacerated perineal

are fading away under the skillful management of our learned accoucheurs, and another decade will see this branch of our profession free from the awful calamities that have so often befallen mothers in the past. How truly may we say there has been progress in our profession when we think of the lying-in rooms free from the dangers of septic poison and erysipelas, when the antiseptic method is practiced as now known by our modern obstetrician.

Perhaps there is no part or branch of our profession where the star of progress shines so bright as in that of modern surgery. Only think of the immense number of laparotomies performed each month in the civilized world by our modern surgeons, and the very few deaths attributable to this undertaking, and then consider how many valuable lives have been lost in past years for the want of this wonderful skill. Think of how slight the suffering with a fractured limb, as dressed with our modern appliances, compared to the ancient dressings and sufferings undergone. Look how antisepsis has almost driven the arch enemy of surgery, erysipelas, out of existence. To what complete juxtaposition the edges of wounds are brought, hardly a trace of the cicatrix to be seen. What a saving in loss of time to the unfortunates, and how near perfect the results of what in former times would have left the poor victim of disaster—if left at all—a helpless cripple. And when we stop and consider all this and much more, we cannot help but say the progressive angel has visited this field of labors very often, and made fruitful each visit.

There is, laboring in medical science, a class of physicians known as general practitioners, who have done much to advance the cause of its high standard and from whose ranks are taken all of the laborers in special branches. Too much cannot be said in praise of these physicians, for they relinquish nearly every comfort in this life (except that of dying poor) and are obliged to bear the burdens of mind that encumber

many of their patrons, in addition to their own sorrows, and yet many of them find time to add to medical literature original ideas that are useful, of much benefit to their less fortunate brother in practice; and one thing in this connection we would particularly note: the right to use these ideas is free; it is not patented nor kept concealed by the true physician; for the spirit of progress prompts them to place the benefit to be derived in the reach of all sufferers.

Pathology has progressed from a condition where assertions and guess-work without demonstration was the basis, to a ground-work that has as a foundation the beginning of normal growth and of abnormal growth, observed by the human eye, aided by the artificial eye (the microscope), the growths closely watched by jealous minds who are ready to negative any assertion made by another if found not correct, and added to if proven true, until long before disease has made manifest its intentions they are known, and means taken to set them aside or ameliorate their effect, and give us reliable authority for making a correct prognosis. While it is true that many changes have to be made in our study of pathology, enough that is correct is left in each effort, and if we think how little our medical forefathers taught of the subject we can only wonder that more mistakes are not made. The germ theory is now taking the place of all other theories, and is being studied by both its friends and enemies with ardor; that it is gaining there can be scarcely a doubt; that it is the true theory can only be proven by more study and more contradictions, and in this age of progress nothing can long remain hidden from the searching minds of investigators.

The social position of the doctors has improved with time; we no longer combine barbering with medical labor, and the tooth-puller and bone-setter that were so famous in days gone by, who wore sheepskin coats, never washed their hands and would not take above a sixpence fee for their greatest

efforts, are only relics now. Instead of these we find well-dressed individuals, whose hands are white and whose charges are only limited by the patient's purse, occupying their palaces. So genteel has become the occupation of the physician that ladies are rushing to our ranks and becoming M. Ds., a thing unthought of in days gone by. The law, however, is slow in acknowledging the good that is in us, for we are placed upon the same level with the blacksmith when we are forced to appeal to its majesty in the way of collections, and our bills that have cost us loss of sleep, loss of pleasure, endangered our health by exposure to inclement weather, are no better than the blacksmith's, contracted for shoeing a mule or any other iron work that he may do. Now, while it is easy enough to note progress in all other branches of our profession, should not a little be made in this particular one, and some acknowledgement made that our efforts to progress are appreciated and a stimulus given us for renewed vigor in the cause?

THE KENTUCKY STATE MEDICAL SOCIETY.	At Crab Orchard Springs, on the 11th, 12th and 13th of July, the Kentucky State
Medical Society met in annual session. Considerable literary work was done, and a great deal of filibustering. A miserable little faction tried to defeat the action of the lawfully constituted nominating committee. It created a great deal of bad feeling, resulting in the unanimous acceptance of the resignation of a troublesome member.	

PRESIDENT MC'MURTRY.	The well-deserved election of Professor L. S. McMurtry, of Danville, to the Presidency of the Kentucky State Medical Society, will serve to strengthen the organization and enlarge its sphere of usefulness, and greatly increase its membership.
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PROGRESS

A MEDICAL MAGAZINE. ISSUED MONTHLY.

HUDLEY S. REYNOLDS, A. M., M. D., EDITOR.

THOMAS C. EVANS, M. D., ASSISTANT EDITOR.

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THE MEDICAL SCHOOLS OF THE EAST.

In a recent issue of the *Medical Record*, a student enters the complaint, that he has been enabled, after great difficulty, to obtain a seat in one of the medical colleges of New York; and that, undesirable as his location was, he was at the additional disadvantage of being obliged to seek opportunities for dissection at a neighboring homœopathic school, because the regular college at which he had entered, had neither material for dissection, nor the facilities for such demonstrations in anatomy, as might be accessible to individual members of the class. With a class of eight hundred students, assembled in one hall, no clinical teacher can ever hope to establish those personal relations between the student and the patient necessary to convey any valuable information either in diagnosis or therapeutics. At the college of Physicians and Surgeons, where more than eight hundred students assembled last session, a radical change is announced. It is proposed to enforce a rigid preliminary educational requirement, to lengthen the term to nine months, and to extend the curriculum to three years, instead of two, as formerly. If these conditions be carried out, they will serve greatly to reduce the numbers at this particular institution; but the flourishing state of the polyclinical

and post-graduate schools, points clearly enough to the utter barrenness of the other schools in anything like actual clinical demonstration.

With eight hundred students seated in an amphitheatre, a clinical lecturer exhibits his patient, delivers his discourse, and not one member of all that large class has derived more benefit than may be communicated to a blind man, or to a patient so situated as never to have seen the patient at all. Clinical instruction, to be valuable, demands the same intimate personal relations between the student and the patient as exist between the private practitioner and his patient. Whenever a class reaches eight hundred in number, less than ten clinical instructors are totally inadequate to the task of clinical teaching. Discussing these matters in the medical press of the East, a painful state of strained relations exist both among the leading school men and the leading journalists. While Dr. Dulles, of the *Medical and Surgical Reporter*, dwells with increasing emphasis upon the proposed reform in the methods of instruction at Jefferson College, and announces the already high standard of requirement exacted at the University of Pennsylvania, he unhappily makes the Medico-Chirurgical College of that city particularly conspicuous by ignoring it altogether by name, and by mentioning that another institution at Philadelphia than those named professes to adopt the three years' graded system. Prof. Flint, of the Bellevue College, New York, in his alumni oration at the Jefferson College commencement, portrays, in graphic language, the ideal picture, with many realistic features, of the American medical student as he has observed him, and he seems altogether innocent in his assumption that he and his colleagues are, in some sense, responsible for the grotesque figure which he holds up for invidious comparison with the medical student of the old world.

The only adequate reform, the one which shall forever blot out the basis for such invidious comparisons, is this: Abandon all

the hypocritical pretense of elevating the standard of medical education by preliminary exactions and the increasing time requirement; establish a standard of literary and scientific qualifications, and a separate standard of practical qualifications for the candidate for the degree of doctor in medicine. Let the schools go on with their instruction, and let the faculties of all the medical colleges in the country send one representative each to an annual convention, which shall determine the character of the examinations of candidates for the degree of doctor in medicine in all the medical colleges in the country, and let the examinations be conducted by this national committee of experts. In this way the school which is the most fortunate in the training of its students shall be the one deservedly entitled to take the first rank, and so on in the same ratio. In this way it is clear there could be neither partiality shown nor injustice done. There could never be a word of complaint about the length of the term, or the number of terms, or the character of instruction. The result of these final examinations would stand out in demonstration both of the quality of the educational training for medical men and the efficiency of the schools which had given that training.

THE INDIANA
STATE MEDICAL
SOCIETY.

The plan of organization of the Indiana State Medical Society is an exceedingly good one. It consists of delegates from county societies, all subject to those rules of professional etiquette laid down in the code of ethics of the American Medical Association. This is a fine system for establishing local societies in each county. Every State in the Union should follow the example. It results in good to every member of the profession in that State by maintaining the principles of fraternity and encouraging the spirit of emulation.

The plan of organization of the Indiana State Medical Society is an exceedingly good one. It consists of

PUBLISHER'S DEPARTMENT.

ROGERS-TULEY COMPANY, Publishers.

WM. R. WARNER & Co., have issued the following notice to physicians:

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“It seems to be necessary to specify Wm. R. Warner & Co.’s Pills and Bromo Soda with Caffeine to obtain what you want.

COCAINE.

The medical profession has about settled

its estimate of the therapeutical value of muriate of cocaine, but it is, unhappily, no easy matter to decide upon the most uniformly reliable source of supply. The editor of PROGRESS had about concluded Merck’s was the only reliable product, when recently he was induced to make trial of that produced by *Parke, Davis & Co.* A fresh sample of ten grains was dissolved in five drachms of distilled water, to which was added one drop of liquid carbolic acid. One drop of this instilled into the eye of a man from whose cornea a foreign body was to be removed, produced complete anæsthesia in three minutes, so that incision of the inflamed cornea, and turning out of the piece of offending metal was not felt by the patient. Twenty other similar experiments yielded similar results.

PROGRESS

A Monthly Magazine for Students and Practitioners of Medicine.

"I HOLD EVERY MAN A DEBTOR TO HIS PROFESSION; FROM THE WHICH AS MEN OF COURSE DO SEEK TO RECEIVE COUN-
TENANCE AND PROFIT, SO OUGHT THEY OF DUTY TO ENDEAVOUR THEMSELVES, BY WAY OF AMENDS, TO BE A HELP AND
ORNAMENT THEREUNTO. THIS IS PERFORMED, IN SOME DEGREE, BY THE HONEST AND LIBERAL PRACTICE OF A PROFES-
SION; WHEN MEN SHALL CARRY A RESPECT NOT TO DESCEND INTO ANY COURSE THAT IS CORRUPT AND UNWORTHY THEREOF,
AND PRESERVE THEMSELVES FREE FROM THE ABUSES WHEREWITH THE SAME PROFESSION IS NOTED TO BE INFECTED; BUT
MUCH MORE IS THIS PERFORMED, IF A MAN BE ABLE TO VISIT AND STRENGTHEN THE ROOTS AND FOUNDATION OF THE
SCIENCE ITSELF; THEREBY NOT ONLY GRACING IT IN REPUTATION AND DIGNITY, BUT ALSO AMPLIFYING IT IN PROFESSION
AND SUBSTANCE."—BACON.

VOL. III.

LOUISVILLE, KY., AUGUST, 1888.

No. 2

GENERAL MEDICINE.

CHRONIC CONSTIPATION.

BY

T. B. GREENLEY,

M. D.

WEST POINT, KY.

Read to the Hardin County
Medical Society.

At the meeting of the Kentucky State Medical Society for 1887, Prof. Joseph Mathews, in his report on "The Diseases of the Rectum," incidentally spoke of constipation, in which he

deprecated the use of drugs to any great extent.

In discussing the paper I spoke of the great advantage of the observation of regularity in habits—that is to say, go to stool at a regular period every day, whether you had an inclination or not, and encourage an action, and went on to remark that this could be done by massage over the bowels—especially the colon, and also by titilating (if I may be permitted to coin a word) the margin of the anus with the finger; perhaps a better expression would be percussing the sphincter ani. Dr. Drake, of Tennessee, pointed out to me the advantage of this proceeding several years ago. By practicing these things, to-wit: The observation of habit at regular periods—say after breakfast, massage over the colon from right to left, and percussing the margin of the anus, a great deal can be accomplished in establishing regular daily motions of the bowels. But we frequently meet with cases wherein the constipated habit has continued so long that the bowel has become almost paralyzed,

and will not respond to any means short of an active purgative. In these cases we have almost complete atony of the muscular coat, and are compelled, in order to effect a cure, to exhibit some tonic combined with a gentle laxative.

The causes of chronic constipation are multiform. From the history of the trouble we find that those who follow sedentary occupations, such as book-keepers, clerks, students, members of the various professions, as lawyers, clergymen, and teachers, and as a class I believe women are more subject to it than men. This in part may be due to the fact that they lead a more sedentary life. Women, during pregnancy, are very subject to constipation. You frequently find patients who are ignorant of the proper time that should exist between the movements of the bowels. You ask them if their bowels are regular, and they will tell you they are, but when you inquire how often they act the answer may be "every two or three days." Now, on close inquiry in these cases you will learn that the evacuations are hard and generally in the form of balls.

It is astonishing how long some persons will go without evacuating the bowels. We have authentic accounts of some going as long as a month, and apparently enjoying tolerable health; others as long as two weeks, and it is common to meet with cases who go a week without such action, and some of this latter class will tell you that they are regular in their bowels.

Dr. D. W. Yandell tells an anecdote of a

man who came to him during the prevalence of cholera in Louisville for a prescription for cholera. When the doctor asked him if he had diarrhoea he answered in the affirmative, that his bowels were acting once a day. When asked what his usual habit was he said once a week. He really thought he was threatened with cholera.

I presume there is no one who goes several days without action of the bowels but feels badly in some particular. He feels, as a rule, incapacitated for much mental work. There is an undue amount of blood to the brain due to partial obstruction of the circulation in the large bowels. There is, necessarily, increased tension in the inferior mesenteric artery, if not in other parts of the systemic circulation. If a man in this condition tells you he is well, he has certainly forgotten how a well man should feel. Then again, long continued constipation may, and frequently does, act as a factor in the production of troubles of a serious character. We may have piles, fistula-in-ano, ulceration of the bowels, both amenorrhoea and dysmenorrhoea, menorrhagia from congestion, and colic from accumulation of gas due to fermentation. Dysentery is a common result of constipation, melancholia or depression of spirits is frequently a concomitant.

After constipation has persisted for years it requires some management and tact to break up the habit. A good many, to accomplish this result, rely on purgatives, which, as a rule, increase the trouble by further debilitating the bowels until they even fail to respond to their efforts. The large bowel, now you may say, is partially paralyzed, and requires tonics to restore its function. I have found great good result from the use of nux vomica and belladonna in these cases, and as it is essential to gently move the bowels once a day in such cases in order to restore the organ to its proper tone. To meet this indication I add to the nerve and muscular tonics podophyllin and aloes. The formula is as follows:

R

Ext. Nux Vom. $\frac{1}{8}$ gr.
 Ext. Belladonna. $\frac{1}{4}$ gr.
 Podophyllin $\frac{1}{8}$ gr.
 Watery Ext. Soc. Aloes. $\frac{1}{8}$ gr.

To be taken at night.

This pill, as a rule, will move the bowels once next day without pain, and of a consistent character, thus imitating nature. It is in these cases where much can be accomplished by massage, etc., with regularity of habit.

The late Prof. Yandell, Sr., used to recommend a glass of water with a teaspoonful of sodium chloride in it an hour before breakfast. It will frequently act after the meal. He used it in his own case.

Lately a drachm of glycerine injected into the rectum is highly recommended in bound bowels. It will generally act, but I would not advise its long continued use on account of its abstracting too much serum from the vessels of the rectum. I think finally it would make matters worse.

In this character of ailment a great deal may be effected by attention to diet. When the stomach retains its digestive powers to a moderate extent, a fruit and vegetable diet will be found very greatly to aid in keeping the bowels in a soluble condition. Although milk forms one of the principal articles of diet, and perhaps the best with many persons, it tends to bind the bowels; but this tendency can be to a very great extent obviated by the free use of fruits—the malic acid of the one antagonizing the lactic acid of the other.

As a rule, it will be found upon inquiry that patients who labor under chronic constipation drink but little water during the winter season. When this is the case we can readily understand why the contents of the large bowels become hardened. The absorbents take up the moisture of the ingesta in order to aid in furnishing the blood with due amount of water. Therefore it is advisable in all such cases to encourage the free use of water. Many persons troubled with costive bowels during the winter are

exempt from that condition during the summer, which, no doubt, is due mainly to the free use of fruits and vegetables and a large supply of drinking water. Then if the same kind of diet, with due amount of water, was used in winter as in summer, it is reasonable to suppose that the trouble would be greatly ameliorated.

But in all cases of this kind I would emphasize the great advantage and even necessity, in order to effect a cure, to endeavor to establish a habit of regularity in going to stool. Some persons are so situated as to occupations that they cannot conveniently, in their estimation, always be punctual in answering the calls of nature in this particular. This is the case more particularly with women. But it would be far preferable to sacrifice business interests in a slight degree than to hazard or jeopardize their health in a great degree. Therefore, to sum up the essentials in the management of chronic constipation, we would urge:

1. Regularity in habit.
2. Selection of the proper kind of food.
3. When necessary aid the action by manipulating the bowels.
4. The free use of water.
5. In long standing cases where the muscular coat of the colon has lost its tonicity, the use of nerve tonics combined with laxatives.

A UNIVERSAL
PHARMACOPŒIA.

BY

ROBERT C. KENNER,

A. M., M. D.

LOUISVILLE, KY.

The object of medical men is to relieve, to cure, and to prevent disease. These aims are not confined to any country, but extend to physicians everywhere, and every

conscientious practitioner is the brother of everyone engaged in this work, regardless of nationality. The success of the International Medical Congresses shows how deeply this fellow-feeling has taken root, and how widespread is the desire to increase

our knowledge by the interchange of opinions. Every encouragement to international exchange of opinion should be fostered, and everything in the way of there being complete agreement should, if possible, be removed. I believe all who have studied medicine abroad, or who have read many foreign medical journals or treatises, have not failed to notice the difference existing between our pharmacopœia and that of the country in which the publication was written. These differences consist not only in the relative strength of the preparations bearing the same name, but in there being preparations in the pharmacopœia of some nations that ours does not contain. Often these differences are slight, or they are explained by the editor or translator if the work is republished in this country. But many times there is no light thrown on these pharmacopœial differences, and it is only with considerable trouble that we can get at a proper comprehension of them. Instances of this kind are constantly met with in Ziemssen's Cyclopædia and other translated German and foreign medical works. I should like very much to give an extended list of the preparations bearing the same name and having different strength in different countries. Also a list of the different preparations of the same drug in the various pharmacopœias. Such a task, however, would be too extended to be thought of in this brief article.

The German, the British, and several other pharmacopœias contain many admirable preparations which we could adopt with benefit. Often we are confronted with preparations mentioned in their works on Practice and Materia Medica which we have nothing like in ours. Many of the prescriptions which go every day to the Scotch or English drug shops would puzzle an American pharmacist; so also would the American prescriptions puzzle the Scotch or English druggist. I have known patients to be given doses of medicine as prescribed in English works by practitioners who never thought

that the particular drugs were of different strength in the two countries. In consequence, the patients would get, as the case might be, more or less of the drug than was needed. It may be said that this would occur only with those who are incompetent or ignorant practitioners, but this is not true. Many medical men, otherwise well informed, give the pharmacopœia little study—especially do they take little thought of that of other countries. Students who have studied in England or on the Continent come home with the idea of drugs made differently and of preparations which our pharmacopœia does not contain. They are therefore forced to learn a *Materia Medica* based on our pharmacopœia. In all the departments of scientific medicine there is harmonious work.

The physiologist, the pathologist, or the chemist in America is working according to the same methods of his scientific brother in Berlin, or London, or St. Petersburg. This is as it should be. It seems to me if the pharmacopœias were in the essential details the same in all countries, the purposes of medical science would be greatly served.

If a congress should meet consisting of representative men from the different important countries, for the purpose of formulating "A Universal Pharmacopœia" on the basis of those of their respective countries, I believe we should have a pharmacopœia which would embody the excellencies of all. It would certainly be better than that of any single country. It would go a great way toward strking down one of the real barriers in the way of making medicine an international science in the fullness of the meaning of that term. Let us hope that this subject may receive the attention that it deserves from those who recognize its importance; and that it will not be long before we shall have an International Pharmacopœial Convention and a Universal Pharmacopœia.

A CURE FOR DIP- SOMANIA.

BY

E. J. KEMPF,

M. D.

JASPER, IND.

Dipsomania is a mental alienation due to a morbid condition of the nervous structures, generally, though not always hereditary. The strictly periodical return of active phenomena, the tendency to gradually shorten the intervals as the years pass, and the peculiar mental conditions preceding the debauch are a proof that dipsomania is a disease of the cerebral nervous centres analogous to recurring neuroses, such as epilepsy, etc.

The disease is nothing but an attack of uncontrollable drunkenness, always kept up until the stomach refuses longer to tolerate the alcoholic drinks. Then the attack stops as suddenly as it came, the sufferer recovers his usual health and spirit and enters into his business in a way as if nothing had happened. As a general thing these attacks recur at intervals of from one to six months, and the end is, some disease of the renal, hepatic, or gastric organs carries off the patient.

Earnest resolutions and pledges do no good to ward off the attack. When the time comes the patient succumbs. An indescribable feeling of weakness of the nervous system is generally the first sign of an attack. This may be brought on by over-work, over-study, anxiety, worry, trouble, anger, etc., and the patient, thinking himself proof against a debauch by his long interval of sobriety, yields to the tempter, and then nothing can head him off. Friends, family, duty, rank, affection, morality, resolutions and pledges are all forgotten, and the patient drinks as long as his stomach will bear it. So strong is this desire for drink whilst the attack lasts that the patient will drink as long as he has money, or rather as long as he can get the liquor, though he may have to beg or steal it.

External momentary temptation in which

the patient may be placed is only dangerous when the patient's nervous system is ready for an attack, that is, craves strong drink. At any other time you can tempt the patient, and he will be able to resist just like any well man.

Malaise describes the premonitory symptoms exactly. As I have already stated, an indescribable feeling of weakness always precedes the attack.

A dipsomaniac is not always an habitual drunkard. There lives a young man near my office who gets drunk about once every two months, though the attacks are getting more frequent, and during the intervals he is honest, honorable, industrious, and upright. During a spell or spree he is a sot.

In the earlier part of the nineteenth century there lived a worthy married couple in Baden. The husband was addicted to the excessive use of alcoholics. The wife was his superior in will-power and intelligence. At her solicitation they moved to this country for the sake of the children, four girls and two boys. The husband started a saloon in ———. His rapid downfall was the consequence. The elder of the boys followed the father into a drunkard's grave. Some of the offspring of the girls are dipsomaniacs. Among the number one granddaughter fell a victim to the destroyer.

The younger son, who had inherited all of his mother's ambition and family pride, determined to better his lot. He studied medicine and graduated, and engaged in the practice of his profession in the backwoods of ———. Acquiring an immense practice for his extent of territory, and his physical condition being much below the average, his health broke down, and now appeared on the surface the dormant hankering for liquor. A tremendous will-power enabled him to struggle successfully against what seemed to him "fate." This physician, a surgeon of no mean repute, is now dead. He left three sons and four daughters. One of the daughters is a chronic sufferer of hysteria, palpitation being the predominant symptom. Two

of the boys are extremely melancholic. One other of the boys is a confirmed dipsomaniac. The oldest son was in a worse condition six years ago, as far as periodical drinking is concerned, than his brother, but he has not been intoxicated from alcoholic liquor since 1882. He considers himself cured.

A very close friend of mine, in fact, my boyhood partner, who died four years ago from apoplexy, was the worst dipsomaniac that I have ever met. His case enabled me to formulate the cure I here present. The treatment did my friend much good, and I believe I could have cured him if he had remained under my care.

Up to date I have but one cure to offer in favor of my method of treatment, but it seems to have been so effectual in this case that I consider it my duty to report the system of treatment.

Treatment.—First, the patient must have a desire to be cured. After he is once a chronic drunkard, with his nervous system totally ruined, I take it for granted that nothing can be done for him outside of an asylum.

Second, the patient must have the idea in his head that he is not a drunkard, but that he is really *sick*, just like an *epileptic*.

Third, the patient must continue to use alcoholics, but in a temperate way. He should avoid fancy drinks, which are, by the way, not fit for a hog's stomach, let alone the human, but good beers (Tarrant's Malt, or Nicolson's Liquid Bread, or Bests' Tonic), mild wines (not champagne), and eggnogg at *meal-time* or with a little *lunch* will benefit the patient. His system needs it. You cannot cure a dipsomaniac by making him swear off, unless you pen him up.

Fourth, the patient must take two grains of the sulphate of quinine in pill or capsule three times a day, before meals. And continue to do this for six months. After that he should take ten grains of quinine once a week in divided doses for the rest of his life, unless, as time passes by, *he* is certain against a relapse.

Fifth, whenever, through an accident or otherwise, the patient gets into a debauch, give him ten grains of quinine every four hours with *whisky* until he becomes thoroughly cinchonized. Do not give him bromides, etc., but if he needs anything in that line give him morphine hypodermically. Go on with the treatment as soon as the patient recovers from the debauch, and tell him men who have no dipsomania and who are kings, statesmen or scientists occasionally “git that way.”

Sixth, improve the patient’s social relations as much as you can, and induce him to avoid bad company. Make him realize that you are confident you can cure him.

<p>A NEW HOSPITAL.</p>	<p>The Charity Commissioners and the staff officers of the Louisville City Hospital have petitioned for a new building. It is to be hoped for the welfare of the unfortunates who are compelled to go there, as well as for the good name of the city of Louisville, that they will succeed in getting it. The one now in use is in every way unfit for the purpose. Notwithstanding the fact that resident physicians are gentlemen of education and professional ability; that the staff officers are untiring in their duty, that the patients are cared for by trained nurses, and modern antisepsis is rigidly enforced, still in spite of all this, the wounds suppurate, and in the obsteric wards puerpural fever is common. The death rate of the institution is so far above that of other institutions of the same size that even the most heartless would be ashamed to make the comparison. The physicians who compose the staff have worked most zealously for years without money and with a small per cent. of glory, for the charity patients who were sent here. Nothing except their modesty and consideration for the feeling of the taxpayers has prevented them from making this request years ago.</p>
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The City Council should grant the request at once. Surely no taxpayer, even the most miserly, could find it in his heart to object if he could only see how badly a new building is needed.

GENERAL SURGERY.

ABORTIVE
TREATMENT OF
GONORRHŒA.
BY
E. M. WILEY,
M. D.
HARRODSBURG, KY.
Read to the Kentucky State
Medical Society, July
15, 1888.

I am well aware of the fact that a large proportion of Genito Urinary surgeons are in opposition to any form of abortive treatment of gonorrhœa. They consider efforts to abort by the injection of corrosive substances, not justifiable, because, they say, substances that destroy gonococci will do violence to the urethra, more serious in its consequences than the worst form of the disease. It is now generally admitted by all the prominent pathologists, and I am sure abundantly proven, that there is a micrococcus, called gonococcus, that is the cause of the disease. Subscribing to this theory, and believing the destruction of the germ on its first appearance in the urethra would greatly shorten if not arrest the disease, has led me to make some experiments with the well-known and popular germicide, corrosive sublimate. It is not my intention to enter into a discussion of the modern theory of this disease, as I have nothing new to offer in proof of it. I simply wish to present a new method of treatment, so far as I know, not yet published. I shall proceed at once to describe, as briefly as possible, the method, and present a few cases illustrating results.

The necessary outfit is simple, inexpensive, and is found in the offices of all well equipped physicians. It consists of a fountain syringe, large size, soft catheter attached, solution of cocaine, five per cent., Price’s glycerine, for lubricating catheter, (vasaline and fatty substances prevent the immediate contact of the microbicide with the mucous membrane) and a hot corrosive sublimate solution $\frac{1}{3000}$ or $\frac{1}{4000}$, according to severity of case, to be used in the following manner: Elevate the syringe filled with the sublimate solution, as hot as can be borne, a short distance above the patient’s

head while standing, as the treatment can best be used in that position. Introduce catheter beyond site of disease as well as can be determined, which, usually, can be easily done in recent cases. Allow the fluid to flow slowly, washing all parts of the urethra in its outward flow. A catheter of medium size is best, as the outflow is materially obstructed if one of the capacity of the urethra is used. I use a No. 6-8. If there is a high degree of inflammation, it is best to cocaineize the urethra before commencing the irrigation, as the pain will be greater than patient can bear. In milder cases I do not use the anæsthetic until after treatment, as the cocaine contracts the urethra, interfering with the introduction of catheter and the outflow of the irrigating fluid. The pain following the irrigation is quite severe, lasting about two hours, unless controlled by frequent injections of cocaine. I have selected from my notes the following cases that will best demonstrate the value of this treatment.

Case 1.—R. P., aged 18, presented himself for treatment July 12, 1887, with what had every appearance of a typical case of gonorrhœa, claiming it as his first exposure, and that with a street walker, on 4th of same month. Being apprehensive of trouble, from what his friends told him, he was on the look-out, and when the first sign of discharge was observed he was promptly on hand for treatment. Being a strong, vigorous youth, I considered him a very suitable subject to try the retro-injections on, which I proceeded to do, as described above, using in this case a sublimate solution $\frac{1}{2000}$, causing great pain and requiring large and frequent injections of cocaine to control it. He did not return until the 14th, and then to announce a complete recovery, which I found, on examination, to be correct. The question then presented itself to my mind, was it a genuine case of gonorrhœa? or was it a case of non-specific urethritis? Yielding so promptly to treatment caused a doubt in my mind. To obviate trouble of

this kind in the future, I determined to make a microscopic examination of all other cases presented.

Case 2.—A. S., aged 40, mechanic, applied for treatment August 22, 1887, on the tenth day after attack, having received no treatment. Case moderately severe. He was given a retro-injection of hot sublimate solution on the 22d, 23d, 24th, all acute symptoms rapidly subsiding from first application. Patient discharged, cured, on the sixth day.

Case 3.—D. V., aged 20, presented himself October 4th, after ten days' treatment by the ubiquitous drug clerk, with usual results. The inflammation was of such a high degree that cocaine was freely used before treatment. Two applications were all that were required to arrest the severe symptoms. The decline of the discharge was rapid. By the tenth day patient was discharged, well.

Case 4.—H. S., hotel porter, presented for treatment October 14th, a severe case of four days' standing. After three days' treatment by the above method all inflammatory symptoms subsided, and was followed for ten days by mild non-irritating discharge.

Case 5.—G. W., aged 38, married, applied for treatment December 25, 1887, on the first appearance of discharge. One irrigation $\frac{1}{3000}$ sublimate solution promptly arrested the discharge. There was no doubt of the genuineness of this case, as it was transmitted at home with the most disastrous results.

Case 6.—J. V., aged 39, came to me December 30th, after six weeks' treatment by drug clerk, with an heroic case. After three applications he was discharged on the 7th of January, cured.

Case 7.—C. H., aged 40, came under treatment March 10, 1888, second day after attack, discharging freely. Received one irrigation and left town. On his return three days later a mild and non-irritating discharge made its appearance and continued

for two weeks, notwithstanding the irrigation was repeated several times.

Case 8.—H. G., aged 39, received first treatment May 2d, third day after discharge was observed. One retro-injection dried up the discharge. One week later a thin, gleety discharge made its appearance. As it was causing no pain or inconvenience, the patient left town, with instructions to use the following injection: Hydrarg Bi-chloride gr. 1, bismuth sub. nit. $\frac{3}{4}$ ss, listerine $\frac{3}{4}$ j, aqua bulens oj, to be used twice daily, which had to be continued two weeks before cured.

All the cases except case 1 were examined microscopically, both before and after treatment. Gonococci were found in all but case 6, which was of six weeks standing before treatment, but not in a single case after treatment.

Since I have employed this treatment I have aborted a large per cent. of cases that presented early, and those of longer standing, instead of growing more formidable, responded promptly to treatment. In not a single case has stricture resulted, nor have I had a hordee to follow the treatment, but cases already having it were promptly relieved.

Viewed from my present limited experience, I believe the severe cases with which we are all so familiar will be unknown in the future, if this treatment is faithfully and scientifically carried out.

DISEASES OF THE RECTUM.

BY

JOSEPH M. MATHEWS,

M. D.,

*Professor of the Principles
and Practice of Surgery
and Diseases of the
Rectum in the
Kentucky
School of Medicine, Louis-
ville.*

A Special Report to the
Kentucky State Medi-
cal Society, at

Crab Or-
chard

Springs, July 12, 1888.

Delivered orally,

and

Reported for PROGRESS.

I remember in the last report that I made to this society, I took the position, that, although antiseptic surgery was the thing of the day, that it was not applicable to disease of the rectum. Since that time I have had the pleasure of reading the admirable work of Dr. Gerster; and I confess he has given me some

antiseptic surgery to the rectum, and I have practiced them. For instance, before doing a surgical operation upon the rectum, I prepare the patient in this manner: First, for two or three days I administer an aperient, so as to get rather active purgation. I direct the patient on the morning before doing the operation—I allude to all operations upon the rectum—he should wash out the bowel with hot water. You all appreciate the fact that the rectum can bear very hot water. Then, before doing the operation, I inject a solution of carbolyzed water. Then I take, according to Dr. Gerster's direction, a sponge which has been made thoroughly aseptic, and push it up three or four inches into the rectum, with a string attached to it. He claims—and so do I—that we have rendered the rectum, so far as we can, thoroughly aseptic. The application of the sponge in the rectum, of course, is to keep in the fecal mass, to keep the liquid portion of it from trickling down upon the part cut. This sponge I allow to remain in until I take off the dressing, which, infistula, I never do for two days and a half. Then I dress the wound anti-septically. So I say to-day, after one year's experience, antiseptics can be done, more or less, in rectal surgery.

In selecting the subjects to speak about, I put down first, hemorrhoids. We have nothing new to report in the treatment of piles. I am glad to say—I take some pride in saying—that this treatment by the injection plan, by carbolic acid, is nearly obsolete in the profession. I remember to have reported to the State Society ten years ago, upon this subject, and in that paper gave my objection to the plan. Dr. Andrews, who has lately written an admirable work on diseases of the rectum, though small, has given a number of deaths from the causes that I claimed in that paper might obtain. So that I say, so far as I can learn, from the profession, not including charlatans, for they prefer injections because they are not surgeons. This plan of treatment is

points with regard to the application of

looked upon with disfavor. The removal of hemorrhoids by incision is favorably regarded by men who write on this subject. I have mentioned this matter before, taking the ground that it was not an operation to be advised; for the reason that in the hands of a man who was not an expert there would be very great danger of hæmorrhage. I remember of having my assistant at the City Hospital to excise in two cases, in both we had very great hæmorrhage; and it took longer to control the hæmorrhage than to do the operation. I believe myself, in the hands of an expert, the cutting out of an internal pile would be an admirable practice.

In regard to fistula in ano, there is something new. One year ago in my report, I think I stated I had operated upon five cases of fistula at that time,—with Otis' urethrotome. It is not an instrument of my own. I am not a mechanic, and have no mechanical skill; and leave the invention of such things to those who have. I simply state that by having the instrument in my office I was able to make use of it. You can take a long fistulous track, and with this instrument you can make the division of the track, and it will heal. Since my report I have had a number of cases, and operated with good success. I say there is something new with regard to fistula; and that is the introduction of the doctrine with regard to union, *a. e.*, trying to get the wounds to unite by first intention. I have done this operation three times. I reported these cases to the Surgical Society of which Dr. Yandell is President. One was not successful. What I mean by not successful is, that I did not get union by first intention, although I practiced antiseptic surgery. In the other I got perfect union, without pus, in a rather extensive fistulous track.

In regard to operations in fistula looking to healing by first intention, I believe, then, that if you have only one main track, and this nobody can tell; frequently, as everybody knows, in introducing a probe into a long sinus, you will find half a dozen sinuses,

that you could not find without the probe. But I say, if by chance you have but one single track, or sinus, if you make a clear division of the tissues, and I emphasize this, and dividing the bottom of the sinus thoroughly, then uniting by deep sutures, I believe you would get union by first intention. If there be, however, a single additional sinus—I do not care if it is not one-half an inch in length—if it runs up the mucous membrane of the gut one half an inch, if that is left as a sinus, discharging or secreting pus, then it will not heal by first intention. We would naturally ask here: Why not operate upon all of these sinuses and get union by first intention? Simply for the reason that you have cicatricial tissue, or this indurated, hard tissue, or the first incision has been so extensive you cannot have apposition, and unless you have apposition, you cannot have union by first intention.

I want to speak a moment while on the subject of fistula of one character of fistula that I frequently meet with; viz: fistulous tracks that do not communicate with the rectum at all. A gentleman from Indiana, a few days ago, brought me a patient, and he had this character of fistula; and I remarked to him: "There is no communication here with the bowel, as you notice," and he replied: "So I do. If I had known it was not a fistula in ano, I would have attended to that myself." I do not see that makes any difference at all whether it communicates with the bowel or not; it is a fistula, in all the pathology pertaining to fistula in ano. We have fistula anywhere outside of the rectum, not within one, two, and up to three inches of the gut at all. Now, the application I intended to make use of is this: The use of cocaine in operating on fistula in ano. In these cases I never administer ether or chloroform; I use cocaine. My method is simply this: I take with me the crystals, or the powder, if you please, and having it measured or weighed, I take half a grain in a little water, draw it up in a syringe, and inject it all along the track. I wait five

minutes, and my test is to take not the probe, but the grooved director and run it in the site. If the patient does not experience any pain, you can make the cut. Frequently half a grain is found sufficient. I have found it absolutely necessary to use in this operation at least half a grain; in several instances, one grain; and in one instance I used a grain and a half. In regard to the constitutional effect, I have never witnessed any yet from cocaine, and I have injected it into the tissues a great number of times.

There is another thing that is new in rectal surgery—and I feel puzzled how to speak of it—not only new to rectal surgery, but certainly new to anatomy, new to all surgery, new to the medical profession of America; and that is the discovery in the rectum of rectal pockets, so-called pus-pockets. I am glad to say that so far as the regular profession is concerned—and I know of no other word by which I can express it in contradistinction to homœopathy—do not believe in this discovery. The homœopaths are using the so-called discovery as a means of making money. They claim that these so-called pus-pockets cause diseases. They go so far as to say they cause Phthisis and that all sorts and manner of diseases are caused by them. It has been demonstrated by all the best surgeons in the United States—and especially Dr. Andrews—that what they cut out of the rectum was what belonged properly to the rectum. I have witnessed numbers of cases of ulceration of the gut produced by these men. I simply mention it to denounce it.

As regards fissures of the rectum, I will simply state that so late an author as Mr. Ball, of Dublin, who has written an excellent work on diseases of the rectum, says there is no operation so successful as division of the sphincter in fissures of the rectum and the anus. I was surprised, because I did not think any eminent surgeon of to-day divided the muscle. I can say with Mr. Ball, that there is no operation in surgery that is attended with so much success as the *dilata-*

tion of the sphincter muscle—that is, I believe the dilatation only should be practiced. I have heard a number of gentlemen describe how they do this. The old authors did recommend that we break the sphincter muscles in diseases of this kind. Certainly those who have practiced it recognize that it is not necessary. The simple gradual dilatation of the muscle, not the breaking of it, is quite sufficient. In certain works on rectal diseases, the authors, in some of their classifications will state that irritable ulcers are synonymous with fissures. I do not believe this. In my paper before the American Medical Association, at Cincinnati, I claimed that the reflexes were due to irritable ulceration, not to fissure.

Dr. Goodel, at the meeting of the American Medical Association in Cincinnati, read an elaborate and a most excellent paper upon what he was pleased to call a nervous rectum, or hysterical rectum, or jealous rectum. I do not know whether he stated his views were original or not; but my friend Dr. Turner Anderson reminded me that I had written a paper ten year years ago and read it to this society upon this subject; but the subject is not a very common one. Dr. Goodel cites a case of this kind: A woman in apparently perfect health is completing her toilet to go out to make a call. The moment she puts on her hat, the desire to go to stool seizes her, and it does not cease until she disrobes and takes off her hat. I have had a number of cases very like this, but I will state only one. A young lady from Florida was under my treatment who had suffered for three years from this condition. The least excitement caused her to have an evacuation of the bowels. If a stranger walked into the room, if she was told to get up and go out and take a walk, it would cause this desire. She could not go into society for that reason. I practiced dilatation of the sphincter. For three years she had not taken any nourishment except stale bread and a cup of tea. The second

day after this operation, she partook of three good square meals, and ever day since she has been eating the same way, with no diarrhoea at all.

The question is, whether this is due to a lesion or not. We all know of this vague term neuralgia of the rectum, or neuralgia elsewhere; it is a very vague term. In these cases, in my opinion, there is a lesion, a nerve is exposed, and that is the source of irritation; and the cure is effected by doing away with the lesion. I scarcely can believe that the term hysterical can be applied to the rectum, or the term nervous rectum, in its full significance. I am persuaded there are diseases that might be called rheumatism of the sphincter muscle. I have had cases where an aching pain was produced by the change of the weather, and other circumstances that would bring on rheumatic attacks in those people who had symptoms of rheumatism. Constitutional treatment for rheumatism clears up the trouble.

I do not know anything more of importance to you, except I will say, in conclusion, that the only thing new in the treatment of constipation is the use of glycerine. We all know how hard it is to rid our patients of this habit of constipation. This new treatment is the injection of a teaspoonful, or drachm, of pure glycerine into the rectum. I have tried it in a number of instances, and I am satisfied it produces good results in some cases, causing the bowels to move in ten minutes. A gentleman came into my office complaining of constipation, and I threw a teaspoonful of glycerine into his rectum and he left, but he soon came running back into my office stating that he had to go to stool. In some cases it acts admirably, but I do not know whether it overcomes the habit or not. I doubt it.

DISCUSSION.

Dr. J. G. Carpenter, of Stanford, said:

This is a very interesting subject to me, and it should be an interesting subject to all

general practitioners especially. It seems to me impossible for a man to practice on the rectum effectually unless he is a good urinary surgeon.

In regard to the hygiene of the rectum, or the antisepsis of the rectum before operation, I believe if there is any part of the body that needs thorough preparation, it is the rectum; and when an operation is to be performed on the rectum, the patient should be prepared the day before; and in addition to the purgative, the rectum should be washed out. The day you are going to operate, as Dr. Mathews has said, the rectum should again be washed with hot water or some antiseptic. I think, sir, we should be as particular with the rectum as we are with the teeth or the mouth. I believe if this should be more considered by the physicians and by the patients themselves, we would have far less rectal trouble than we have.

Now, as to the use of the sponge inserted into the rectum before the operation, though I have not used it. The day before, and the day of the operation, I have had the rectum so thoroughly cleansed, that it has not been necessary. You can put the patient on his left side, and almost on his head, and the gravitation of the intestines is toward the diaphragm.

Now, as to the treatment of fistula, Dr. Andrews gave a most excellent article in *Gaillard's Medical Journal* on the treatment of fistulas of the anus, and the use of drainage tubes, and the local application of astringents or caustics, as the case might require, and as the sinus contracts a small tube is inserted. The case yields in a very short time—a few weeks—in that way. But the most speedy result I have seen in operations for fistula was by the use of the bistoury, with hot iron, or cautery; the patient is well in two weeks.

While I have seen excellent results from the treatment of piles with carbolic acid by injection, it is not much used to-day. Dr. Mathews some years ago condemned it, as

also did Mr. Allingham, of London. As to the treatment of piles by other surgical methods, the cautery and the clamp have gone out of use.

In regard to the injection of glycerine into the rectum to produce a speedy evacuation, I have seen the happiest results in two or three cases, and my friend Dr. Bailey speaks very favorably of it.

Now, in regard to the dilatation of the sphincter ani, in my mind that is a dual operation; not only is the muscle stretched, but there is, to my mind, a nerve-stretching produced. It stretches the nerves and the sphincter muscle. These nerves supply these parts, and undoubtedly they stretch, and may cause by their exposure an obstinate case of neuralgia where we have no ulcers. I do not know of a more trying ordeal for a man to go through with than that of the victim of spasmodic stricture of the ani, of which I was once a sufferer myself. Not only was the act of defecation made difficult, but I had one attack of neuralgia of the heart from that cause. I do not know of anything that saps the vitality of the patient more than this affection of the sphincter ani. I had been riding along the road, as well as I ever was in my life, and I had something to cause a shudder to pass all over me, as if I was struck by lightning, and I dropped my lines. I would go two or three weeks without any trouble, but on a sudden change of weather, or if I would take a cold, it would return. I would pick up again, however. The stretching of the sphincter ani not only allays irritation of the muscle, but it will cure ulceration; but it will not cure a fistula, and it will not cure piles. Whatever condition is present there besides the spasmodic condition of the muscle will be overcome. I find the tube for washing out the rectum one of the most valuable instruments we have. When the patient is in a condition for examination, you simply introduce the tube into the rectum and wash it out; he is unconscious of what is going on.

Dr. W. L. Rodman, of Louisville, said: I do not think Dr. Mathews in his excellent report does full justice to the treatment of piles by carbolic acid injection. While it is not applicable to as many cases of hemorrhoids as ligature, I take it, in many cases, it is even better than ligature. I think Kelsey has probably laid down good rules for the treatment of piles: and he says that unless the pile has a distinct pedicle, and unless it has a disposition to bleed, then the ligature is always the best treatment; then if the face of the pile be not too broad, and if the pile be not disposed to bleed too much, he thinks the treatment by carbolic injection is always better than anything else. Then he says if the base of the pile be very broad, and it be disposed to bleed very freely, then there is nothing equal to the operation of Henry Smith, by the clamp. Then if there be a simple granular condition of the mucous membrane, there is perhaps nothing so good as a single application of strong nitric acid. I think the doctor is mistaken when he says but few practitioners are using carbolic acid now. I was present, and heard the president of the society say he used it all the time. I use it in a private practice more than anything else, simply because many of the patients will submit to it that will not submit to the ligature and the clamp. It is not necessary to give an anæsthetic; that is another thing which is, of course, of great advantage to the operator at the time. So I think the surgeon should take rather broad grounds here, and not confine himself to any one operation. Sometimes the ligature is best, sometimes the clamp is best, sometimes carbolic acid injections are best. Just as our friends here this evening find cystotomy, I think the analogy is just the same here; and I think the doctor hardly does justice to the treatment by carbolic acid injection.

Dr. D. W. Yandell, of Louisville, said: I have listened to what Dr. Mathews said with a great deal of pleasure. Indeed, if I made a criticism at all, it would be just the one made by Dr. Rodman. I think the

real advances we are making all along the line, both in medicine and surgery, may be comprised, perhaps, in this sentence: That we are revising old methods; we are testing new methods, and we are trying to hold fast those which are best. In these days hemorrhoids have been very much more actively discussed and more easily understood, as those of you who have read the new books and the old ones, which I have done, can very readily distinguish. We find there is more known about hemorrhoids to-day than when Dr. Mathews was a boy and I was a student. Then there were two methods of treating them: One by nitric acid, and the other by ligature. The introduction of carbolic acid made a new era in the study of this disease, which has been very profitable to us in a great many ways—first carbolic acid, and then the more radical operation of excision. Dr. Mathews has a great deal of mental rectitude, and I don't believe he would make any statement in which he did not think he was thoroughly warranted; but I do not think he is warranted in saying that carbolic acid has fallen into deserved desuetude. I use carbolic acid, but not so universally as I did at one time. I restrict it to the cases that Dr. Kelsey has pointed out. Then I use the ligature in other cases; and I am partial in certain cases to nitric acid, all of which is to say what has been better said by Dr. Rodman. There are cases which are treated best by carbolic acid; others by the ligature; others by clamp; others by excision; and others by simple dilatation of the sphincter. Vernuil, (?) I believe, when he first came to realize the value of dilatation of the sphincter, said nothing else was needed but dilatation. Now, I use a combination of dilatation with carbolic acid. In the pile described by Dr. Kelsey and others, we have a most admirable operation, and one applicable to many cases where other operations would not be accepted, and the patient drift into the hands of the charlatans.

Dr. J. G. Carpenter, of Stanford, said: I

want to say a word in the interest of the general practitioner. Do you confine the use of carbolic acid to internal piles alone, and do you inject only one at a time?

Dr. Rodman, of Louisville: From twenty per cent. to full strength. When the injection was deep enough, I have had no trouble at all. That is the way I have always used it—internally.

Dr. Mathews, of Louisville: I feel called upon to reply to reply to the criticism of my friend Rodman, and to Dr. Yandell especially. I did state, sir, twelve years ago, that theoretically I was opposed to the injection of carbolic acid, and I gave then my views, and I gave them practically, too, because I reported forty cases that I had injected. I maintained that it was a dangerous operation, and not comparable to any operation known. After the lapse of twelve years, I find not one single man who has ever written a book on the subject of surgery, or a book on diseases of the rectum, that ever gave it a mention, except to condemn it. Certainly the authorities upon diseases of the rectum who have written special works should know something of this remarkable cure for hemorrhoids if it is what it is claimed to be. My predictions have been verified; and Dr. Andrews, of Chicago, has collected, as carefully as he could, statistics on this subject. He says that out of 3,304 injections of carbolic acid, there has been thirteen deaths. Mr. Allingham has performed the operation by ligature thousands of times without a single death. I, myself, in my short experience, have done the operation nearly a thousand times, and not a single death. So I say that nothing else but the bare statement that with the use of carbolic acid, out of a few thousand there has been a number of deaths, and out of so many thousands with the use of the ligature there has been none, why that alone is an argument that cannot be refuted. As regards Dr. Kelsey, he first advocated the cure of piles by ligature; then he changes to carbolic acid; then to the

clamp and cautery ; and after he had written his last work, he issued a little volume to beg the pardon of the profession that he had ever advocated the use of carbolic acid.

Dr. Rodman has stated that Dr. Kelsey has said the use of carbolic acid must be limited to piles with a pedicle. Who ever saw an internal pile with a pedicle ? I never saw one. It cannot be maintained that an injection of carbolic acid is not dangerous, because any surgeon knows that if the pile is injected it coagulates, embolism may ensue, and death, or death from peritonitis. No man can deny that if you throw an acid into a pile, there will be sloughing ; nobody will deny if you cure hemorrhoids by carbolic acid injections, you cure them by sloughing of the tissues. You may talk about atrophy as much as you please, if you cure a pile by carbolic acid you do it by sloughing ; and it will leave an ulceration, and consequently you may have a stricture. I can go to my record books and show you dozens of cases of stricture from the use of carbolic acid.

Dr. Rodman says that it does not require anæsthetics ; that anybody can do this operation. Certainly anybody can do it ; children can do it ; but I have seen men and women laying on their backs in the most agonizing pain from it. I say, truthfully, if sloughing does not take place, the hemorrhoid is not cured. I can show you instances where piles had been injected, and by divulsing the sphincter muscle show you the hemorrhoids. I have operated on dozens of men who had been previously operated on by carbolic acid injections, and found this the case. Therefore, I maintain that if life is at stake, why should we go into an operation of this kind, which is very dangerous, when we might follow the advice of Mr. Erichsen : "All internal piles should be tied ; all external piles should be cut off" with profit. There is nothing so radical in cure as tying them with a silk thread, and allowing them to slough off. After an experience

of twelve years, I believe it is a dangerous thing to inject piles with carbolic acid.

Dr. D. W. Vandell, of Louisville, said : It is an easy thing to talk as my friend Dr. Mathews has done. I might in the same strain go on to call his attention to individual experience—to many published experiences—not only in operations for hemorrhoids, but in other operations. How long was the operation of ovariectomy denounced as utterly unsurgical ? What of ovariectomy to-day ? I have known in the city of Louisville two deaths from hæmorrhage after operation on hemorrhoids. I have known one case of tetanus, and one case of sloughing of the rectum with tetanus, terminating fatally. There are four cases. It was urged time and again against Henry Smith's clamp operation that it was dangerous, against Allingham's operation it was urged time and again that it was dangerous ; and although Mr. Allingham has by manual dexterity—the same sort of dexterity Mr. Keith has—the same sort of dexterity Dr. Mathews has—succeeded in his operations, and has piled up a great lot of statistics in which no fatal results have occurred, yet they do occur in the hands of other practitioners. So that to state that he has seen these things, goes simply as a statement ; that Mr. Smith has seen these things, that Mr. Allingham has seen these things, goes as a statement, nothing more. You can make it very sweeping ; you can go beyond the boundaries of good logic. Deaths have occurred from these methods—every one of them. Dr. ——— was a good surgeon, and Dr. ——— did much rectal surgery. One of the most prominent ladies of Louisville died of hæmorrhages in his hands. Dr. ——— operated by ligature ; he cut some vessel, and the patient died of hæmorrhages of the rectum. I said advances were made, not by denouncing this operation or that operation, but by the aggregate experience of a large number of men covering certain results. Certain kinds of piles are treated best by certain methods. When nitric acid was

first used, it was claimed as universally successful; then its enemies came and said it was sometimes dangerous. I do not think it is scientific to deal in such sweeping assertions as my friend has done.

Dr. Mathews: I base them on facts, Dr. Yandell.

Dr. Yandell: I give facts, too. There is no trusting in them. The fact that death has occurred as a result in a certain operation in a certain number of cases, does not militate at all against the operation, since the same facts have accumulated against all the others. I think you do Kelsey a great injustice. I know Kelsey has written other books; I know he has changed his mind. I do not think he has written that book as an authority. In it he states he uses carbolic acid. He does not denounce it; but he limits it to a certain number of cases. My experience does not run up into the thousands; but I have had a considerable rectal practice; and I have never seen the pain he speaks of except in one case, which was my own fault by introducing it into a pile not suited to it where there was a lot of cellular tissues about the rectum. In my experience I have not known a patient to make any particular complaint of pain at all. I have known them to complain of a little burning—of a little sensation of heat—but it was all gone in a little while, before my next visit, and it is very seldom I have had to leave even a dose of opium. I have injected piles in pregnant women, and they have gotten well, and not only gotten well, but gotten well without danger. I think hemorrhoids are cured sometimes without sloughing; but, allowing that sloughing is a danger—and it is, because it is a suppurating surface—I would like to know if you not have a sloughing after ligature, after an excision, after a clamp? So it is a danger common to all; it is not confined to injection of carbolic acid by any means.

Dr. Mathews: Certainly we have a sloughing of the pile when we tie it, not of cellular tissue, however. If I inject it, and I cannot

graduate my dose properly, it runs into the cellular tissue; and, consequently stricture may result. Dr. Kelsey says emphatically in his last work on hemorrhoids that the injection plan has seen its best days, and is now on the decline with the profession.

Being a specialist, I may see many more cases of this kind than Dr. Yandell; therefore, I speak what I know to be facts when I say that intense pain for days is the rule after injecting piles. That great danger attends it Dr. Yandell cannot deny. I reiterate what Dr. Andrews has published, that out of a little over 3,000 injections there has been thirteen deaths. This speaks for itself. All pathology is against the plan, and so long as it is used, for surgical reasons, there will be death to follow as a consequence. It is painful, uncertain, dangerous.

MEDICAL

BULLETINS.

The propriety of issuing bulletins announcing the condition of distinguished patients has recently been called in question. We would not censure the motive of the men who issue bulletins. But the practice is wrong. The physician who lends himself to it wrongs himself, wrongs his profession, and worst of all wrongs his patient by proclaiming his infirmities to the world. That the public has sufficient curiosity to willingly read and that the press is more than willing to print all particulars, even to disgusting details, there can be no doubt, especially if there be a difference of opinions among the consulting physicians which they can distort or magnify.

The "Public" as well as the "Press" is entitled to many "Rights." But the privilege of entering the privacy of a man's home or the sanctity of his sick chamber, should not be one of them. This privilege is delegated to the physician alone, and what he finds there he is, or should be, in honor bound to keep sacred, despite the clamorings of a mercenary press or morbid public.

We all feel humiliated to have our weaknesses, whether they are mental or physical, made public. No matter how public the man his ills are not public property, not daily rations to be issued to morning papers at so much per column.

EYE, EAR AND THROAT.

DISTINCT AND
INDISTINCT
VISION.

BY

JAMES JURIN,

LONDON.

An appendix to "a complete system of opticks," by Robert Smith, L.L. D., Professor of

Astronomy and Experimental Philosophy, at Cambridge, and Master of Mechanics to his MAJESTY," Cambridge, 1738.

Continued from June Progress, Page 563.

76. But it may not be amiss to observe that this *penumbra*, which we call rectangular, is not strictly so, nor exactly as we have represented it, but cut off at the corners nearly in the following manner :

Let $c a b d$ represent one angle of the *false image*, $C A B$ one angle of the *true image*, and $H I G$ one angle of the *rectangular penumbra* ; and from the center A with the *radius of dissipation* $A g$ draw the *circle of dissipation* $A g f e h$, touching the lines $I G$, $I H$ in the points g and h respectively ; and produce the line $c e$ till it intersect $G I$ in the point l , and produce the line $b a$ till it intersect $H I$ in the point m . Then it is manifest from the construction that these two lines $c l$, $b m$ must touch the circle $e h g f$ in the points g and e respectively.

Now it is manifest that the point I being more remote from any even the nearest point of the *true image*, as A , then by the *radius of dissipation*, can receive no light from that image. And this is equally true of every point in the space $g I h$, comprehended between the two tangents $g I$, $h I$, and the arc $g h$. Consequently the *rectangular penumbra* does not extend to any part of that space.

Farther, the point f receives light from a semicircle of the *true image*, as is plain from this Figure compared with Fig. 34 : But the point A receives light only from a quadrant of the *true image*. Therefore the light of the *penumbra* from f to A must be weaker than from f towards B , and must gradually decrease all the way from f to A .

It is easy to see likewise, that the outer edge of the *penumbra*, which is everywhere

equally luminous in the line $G I$, does begin to decline about the point l , and decreases gradually from l to g , where it vanishes.

And also, it is plain from Art. 73, that the light, which is equally strong along the edge of the *false image* from b to a , begins to decline at the point a , and grows gradually from a to e .

It is therefore manifest, that in every parallel to the line $A B$, the *penumbra* grows weaker without the line $l f a$, or towards h , than within the line, or towards B .

In like manner it will be found, that in every parallel to the line $A C$, the *penumbra* is weaker without the line $m e a$, or towards g , than within that line, or towards C .

Therefore, the lines $l f a$, $m e a$, may be looked upon as the bounds of the *penumbra*, since that part of it which appears within the angle $l a m$, is considerably weaker than what appears within the angles $l a b$ and $m a c$.

77. Hence the *false image*, with the *penumbra* about it, must put on the appearance represented in Fig. 36, where the same letters denote the same things as before. And this in fact is nearly the case, when the corner of a distant high wall, or square tower, is looked upon by a short-sighted person, or by one long-sighted using a pair of spectacles, or a convex glass, against the sky-light.

78. For much the same reasons, a pyramid or spire of a church, will, under the same circumstances, appear, as in figure 37, after the manner of three different spires one stronger and lower as $c a b$, the other two fainter and more elevated as $H m b$, $G l c$, as in fact will nearly be found by those who make the trial.

I say nearly, because this appearance, as well as that of the preceding article will be a little varied from a cause hereafter to be assigned. See Art 199, 200, &c.

79. If the *radius of dissipation* increase, the *false image* $a b d c$, will decrease both in length and breadth ; but the breadth will decrease more in proportion than the length ; for as much as the equal radii $e f$, $e f$, are taken both out of the breadth and length, as in Fig. 38.

OBSTETRICS AND GYNÆCOLOGY.

DELIVERY

PRIOR TO THE
SEVENTH MONTH.

BY

WILLIAM H. PARISH,
M. D.Read to the Philadelphia
County Medical Society
Stated Meeting June
11, 1888.

In the management of delivery prior to the seventh lunar month, the welfare of the mother is alone considered. The non-viability of the embryo or foetus removes it beyond consideration. It is true that the question as to whether the threat-

ened abortion or miscarriage is inevitable or not will frequently arise, and will challenge our most anxious study, for upon the continuance of the pregnancy hangs the life of the intrauterine being if it is still living. It is my purpose, however in this brief communication to discuss the management of only the inevitable deliveries prior to the viability of the offspring, and not to treat *in extenso* of any other part of the general topic of abortion or miscarriage.

The impossibility of ascertaining the number of abortions occurring in any large community has been generally recognized, so that the conclusions based upon figures given as to the proportional ratio of the number of deliveries of non-viable children compared with labors after the seventh month are unreliable. It is my belief, also, that the mortality following abortion or miscarriage cannot at present be arrived at even to an approximate degree. The desire to conceal the cause of death either because of the illegitimacy of the pregnancy, or because of criminal interference, or because of the known tendency of the gossiping to ascribe all such deliveries, especially if fatal, to criminal interference, leads to the writing of misleading certificates. Some of the deaths ascribed to septicæmia, or pyæmia, or typhoid fever, etc., are deaths following abortions or miscarriages. Treatment must be based however, not only upon the actual risk of a fatal result to the

mother, but also upon a full appreciation of the fact that improperly managed deliveries of non-viable off-springs entail upon the woman a number of serious conditions. Subinvolution of the uterus and of all the structures functionally associated or closely related by position is of frequent occurrence. Septic endometritis with septic endosalpingitis, ovaritis, and localized peritonitis, adhesions, crippled ovaries, imprisoned, it may be, in lymph deposits, fixed and occluded tubes, permanently damaged endometrium acute uterine flexions and prolapse, and septic blood infection with impaired nutrition and nerve exhaustion; such are, in addition to a fatal termination, some of the results to be guarded against by judicious treatment. Again many cases of acquired sterility are traceable to abortions or miscarriages, and extrauterine pregnancy, known now to be of greater frequency than was formerly supposed, may be doubtless, in many instances traceable to tubes damaged by abortions.

He, then, who bases his treatment upon only the desire to save his patient from death, has not grasped the full indications of his case. To prevent death from hemorrhage and from intense blood poisoning is certainly his duty, but not his whole duty. His whole duty rests upon the indication of restoring the woman to the conditions of health, both locally and generally, so that the various structures, especially of the pelvis, may be uninjured, and the various functions, especially of the sexual and related organs, may be performed with physiological ease and safety. Delivery during the early week of pregnancy is attended with a minimum risk to life, yet of subinvolution, often with endometritis and endosalpingitis, frequently follows such an abortion. About the third month begins the actual danger of death from hemorrhage and septicæmia, and this danger increases as the period of pregnancy at which delivery occurs advances up to the time when viability of the child begins and the

phenomena of labor at full time more or less pertain. It should be borne in mind that crippling of the functional sexual capacity of the woman is liable to result whatever the period of non-viable delivery.

The treatment of such a delivery is divisible into the expectant and the active plans. The chief difference between these two plans consists, on the one hand in securing artificially the emptying of the uterus if nature does not effect this promptly, while on the other hand, such interference is strictly avoided, at least until symptoms determine danger to the patient. During the early weeks, there not arising practically any danger of loss of life, the plan of non-interference is not departed from by its advocates, and is adopted by not a few of those who resort to the more active treatment in the more advanced deliveries.

In early abortions, say prior to the end of the second month, in addition to rest for eight or ten days in bed or on the lounge, I have practiced during late years antiseptic cleansing of the uterine cavity by means of one injection of a corrosive sublimate solution, 1 to 4000; after the escape of the ovum, I resort to only one injection and always use are turn-tube catheter. I have not thought it necessary to resort to the curette prior to the second month, except when by reason of instrumental interference septic infection is especially liable. During the third month, in addition to the antiseptic intrauterine injection, I use a smooth wire curette, preferably immediately after the escape of the ovum, resorting at the same time to the injection. It is during and after the third month that dangerous hemorrhage may arise. If the patient is confined to the recumbent posture danger from this source, however, rarely occurs. If the bleeding appears, however, before the os is sufficiently dilated to admit of emptying the uterus, I tampon both the cervical canal and the upper vagina. For this purpose I prefer strips of baked cloth, because of the

ease of introduction and of removal. Antiseptic syringing is resorted to both before the introduction and after the removal of the tampons. The tampon should not be resorted to as a routine treatment. Hemorrhage that is not controlled by the postural treatment and by cold applications, is the only indication for the tampon. After the os is dilated the best way of treating the hemorrhage is to empty the uterus and to inject into its cavity hot antiseptic water. In the absence of serious hemorrhage, the rule to avoid rupturing the membranes should be rigidly adhered to, inasmuch as an unbroken ovum tends to prevent or to check hemorrhage, and if the ovum is delivered with unbroken membranes, the placenta is most likely to be expelled in an intact condition. If the membranes have been broken, the embryo or foetus usually escapes from the uterus, while the placenta and membranes remain within the uterus, and are probably adherent to it. Suppose the embryo or foetus has escaped, then, as is well known, the placenta and membranes will usually be expelled within twenty-four hours, yet in a large proportion of cases they will remain within the uterus for days, weeks or months. Does the continuance of the placenta within the uterus for even a few days at a non-viable period of pregnancy bring dangers to the patient? The answer to this must be absolutely in the affirmative. Such danger is a very considerable one to life from both hemorrhage and septic infection. And even should the patient escape with her life, I do not believe that any one ever escapes without serious injury to the child-bearing apparatus. Under such circumstances arise conditions which are likely to produce sterility or to determine subsequent abortions. Such patients suffer, it may be throughout their sexually active lives, with disturbances of the functions of the vagina, uterus, tubes, ovaries, bladder, and rectum with varying degrees of other local and constitutional suffering.

Septic changes of the products of conception under such favorable conditions of warmth, moisture, and contact of atmospheric air are developed so rapidly, that although absorption is probably not so rapid as at or near the full period of gestation, no one can say how soon the process of septic infection begins. The incipency of such blood-poisoning is not heralded by any definite symptom. Even the rise of temperature, as shown by the thermometer, is not fully reliable unless observed every hour or two, and to wait until hemorrhage, or a rapid pulse, or a chill, or decidedly high temperature supervenes, will prove in not a few instances to be waiting until a fatal result is inevitable. Or should the uterus have emptied itself within a few days without evidence of danger of death, still in the great majority of such cases I believe that grave, and it may be permanent local damage will have resulted. We are told to let the placenta remain until there are evidences of danger and then to remove it. Wherein is benefit to be derived from such a rule of practice? Is it not wiser to take due precautions against a fire than passively to await the developement of flames within the building? An abortion or a miscarriage is a non-physiological accident, it is unnatural and pathological. There is no weight then in the argument that artificial removal of the placenta is unnatural and unphysiological and hence should not be resorted to. Its retention brings to the woman her greatest danger both to as to life and to future usefulness. A uterus promptly and rightly emptied, uninjured by traumatism and rendered aseptic, becomes a source of comparatively little, if any, danger.

As in labor after the child has become viable, so in abortions or miscarriages ergot is of great service after the uterus is empty. It then encourages involution, checks excessive lochial flow, expels clots, and lessens septic absorption. Before the uterus is empty this drug is seldom of more than

limited value, and often is productive of actual harm.

When the hemorrhage is considerable and the ovum intact, its administration will aid in controlling the loss of blood, but even here the tampon is usually sufficient. I believe that I have repeatedly seen the use of ergot retard the completion of the delivery by determining an undilatable condition of the cervix. Such belief has been strengthened by finding that under such circumstances the administration of an opiate hastens the delivery by relaxing a cervix that has been rendered rigid by ergot. In incomplete miscarriage there is nothing more uncertain than the action of ergot. After its use the uterus may not empty itself for days or weeks, while the cervix closes so as not only to prevent the escape of the placenta, but also to prevent easy artificial extraction.

If you decide upon emptying the uterus, what is the best method of doing so? Prior to the third month the small size of the cervical canal renders the introduction of the finger difficult, and the curette is here sufficiently efficient, either before or after the escape of the ovum. The thickened decidua may then be readily removed with this instrument.

After the third month we have chiefly the placenta to deal with, and here the introduced finger is safer, more efficient, and more reliable than any curette. The finger more thoroughly and more certainly removes all the products of conception, and tells the presence or absence of such complications as polypi, fibromata, etc. When reliance is placed solely on the curette, the uterus may be supposed empty when it is not; fragments of placenta and of membrane, or even the entire placenta may be left, with extreme risk to the patient.

If one is present at the time of the escape of the embryo, and the placenta remains, he should at once, while the os is dilated introduce his finger into the uterus, and while depressing and steadying the uterus

with the other hand over the abdominal wall, dissect off *en masse* and completely the secundines and remove them. To effect this it may be necessary to give an anæsthetic. After emptying the uterus it should be at once syringed with a hot corrosive sublimate solution.

There will be, in all probability, no indication for a repetition of the intrauterine injection, though daily intra-vaginal antiseptic syringing for eight or ten days has been my practice. If the case is not seen until several hours have elapsed and the placenta is still within the uterus, and ergot has not been administered, the os will be sufficiently dilatable to admit of an immediate resort to the prompt treatment. If at that time the cervix has already contracted because of ergot, the suspension of the ergot and the administration of an opiate, non-interference of a few hours, will secure a dilatation of the os to such an extent as to permit the emptying of the uterus with the finger. If a number of days or weeks, or months, have elapsed and the symptoms indicate an incomplete emptying of the uterus, and the cervical canal is closely contracted, it will be better to dilate either with laminaria tents or with graduated bougies and to introduce the finger, than to rely upon any form of curette. After grave septic poisoning has occurred, a cervical canal that has been previously contracted undergoes a relaxation, and the placenta becomes detached or is so loosely adherent that its removal with the finger is usually a very simple procedure, and is, according to even the expectant practitioner, urgently demanded; but, immediately following removal of the placenta under such circumstances, evidences of more intense poisoning are frequently observed, and in many such cases a fatal termination eventuates.

There is but one form of curette that should ever be used for the removal of any of the products of conception. The perfectly dull wire curette is the only safe one. Every form of the sharp-edged instrument should

be absolutely avoided. Simon's scoop is a dangerous instrument in the hands of the most careful. Much of the opposition to the curette is based upon the use of that or other cutting instrument. Even with the dull wire due caution must be used not to injure the uterus. A softened womb may be penetrated by even a dull instrument. My preference for the finger over the curette is based, however, rather upon the uncertainty as to the efficient working of the dull curette than upon its dangers. It would seem scarcely necessary to caution any one not to mistake the somewhat elevated and roughened placental site for portions of the placenta itself; but in one instance I saw such a mistake made by an inexperienced gentleman who made active efforts with Simon's scoop until the uterine tissue was extensively gouged into by that dangerous instrument. Experienced men have left large masses of placenta—in fact, the foetus and its placenta both—in *utero* after the cavity has been curetted. The possibility of double pregnancy with separate placentæ must not be lost sight of. I have seen an instance in which the physician removed with his finger under anæsthesia one foetus with its secundines, and left within the uterus unrecognized a second foetus and its placenta until uterine contraction secured their expulsion.

I have not referred to the various complications of non-viable deliveries. They are numerous and may call for special additional measures, but the management of the delivery rests upon no peculiar principle. Criminal abortion brings with it greater dangers, but usually the management does not differ materially from that of the non-criminal delivery. In the criminal variety septic infection may occur before the abortion or miscarriage has begun, and the expectant plan of treatment is attended with the greatest dangers. An injudicious introduction of the sound may engender a septic inflammation of the endometrium and determine a fatal result before any part

of the ovum is expelled. Under such circumstances non-interference contributes to death.

In inevitable abortion I have repeatedly emptied the uterus by compressing the body between two or three fingers within the vagina and in front of the uterus, and the other hand over the abdomen. I have also secured, in a few instances, a prompt ending of an incomplete abortion or miscarriage by the injection of hot water into the uterine cavity, of course securing its ready outflow. The hot injection awakens corporeal contractions with cervical relaxation, and, if the fluid is antiseptic, diminishes the danger of infection.

DISCUSSION.

DR. WILLIAM

GOODELL: I take ex-

ception to but one point in this admirable study, and that is, to the use of the dull curette for several reasons. There is great danger of wounding the endometrium in its soft, thickened, and vulnerable state. Then there is this very danger, the speaker has mentioned, of mistaking the placental site for tissue that should be removed, and the further danger, which he also admits of perforation. I am sure that I once penetrated the wall of the uterus with a sound, and without using any force—though, fortunately, I escaped an evil result. There is danger of wounding that portion of the uterine wall which is not at all implicated, if I may so express it, and especially, two or three days after the abortion, would this cause a liability to the creation of a fresh raw surface upon perfectly healthy tissue, with additional danger of infection.

I use two styles of forceps, one a small catch-forceps, which will seize anything that projects, or, still better, a small fenestrated polypus forceps, which can grasp any projecting mass, however small, and that only.

DR. REGAR: How can we tell that the uterus is completely cleaned? The finger

cannot always determine with certainty. How long are we to keep up examinations and attempts at cleansing?

DR. J. B. WALKER: May we not answer the preceding speaker by saying that as long as the os is patulous the uterus contains something that needs removal; after removal contraction will occur. That has been my experience in several cases. I would ask Dr. Parish whether the rule holds good in all cases?

DR. H. A. SLOCUM: I rather fear to follow the advice given to permit the ovum to escape entire. I remember two cases which fortunately terminated favorably, but which gave me much anxiety, in which the escape of the ovum entire was followed by alarming hemorrhage. One of these was in a well-developed florid woman who had a history of repeated miscarriages. When I was summoned she was bleeding slightly, and the labor pains were strong and constant. With my finger in the vagina I waited for the ovum to be expelled entire. It came with a gush of blood that blanched the ruddy face of the patient and left her pulseless. I was compelled to remove the pillows, elevate the foot of the bed, and with finger and hand endeavor to excite uterine contractions, after which, with hot water injections and other appropriate measures, the bleeding was controlled.

When a uterus is distended with its contents, and the placenta leaves its site, and the large mass is suddenly expelled, it seems to me that the sinuses will be left wide open, and the contractile vigor of the uterus will not suffice to close them.

I agree with the advice to remove the placenta as soon as possible. I remember a case, however, in the practice of a distinguished practitioner, in which, for what reason I do not know, it was left for six weeks free in the cavity, becoming hard and leathery, and was then removed under anæsthesia. My only connection with the case was to give ether, so that I know nothing further of the circumstances than

that the placenta remained for six weeks without giving rise to any bad symptoms.

DR. W. E. ASHTON: I would take exception to the speaker's low estimate of the value of ergot. While I will agree that it is contra-indicated, except with a tampon, yet if the tampon be introduced, and ergot then administered, the effect will be much more prompt and sure, and the presence of the tampon will prevent anything like hour-glass contraction. After a complete abortion I should consider intra-uterine antiseptic irrigation uncalled for, and rather dangerous as tending to introduce air, and, therefore, germs, into a uterus which is otherwise in an aseptic condition.

DR. PARISH: In reference to the dull wire curette, Dr. Goodell could not have heard my remarks, or I must have failed to express myself clearly. I do not use it except at one stage, that is the third month, never after the placenta has been formed. I prefer the finger for many reasons, as I stated. Even with the dull instrument there is some risk of injury, and the method is unreliable. Dr. Goodell and I accord perfectly, after the third month. Before the differentiation of the placenta, however, the smooth wire curette will detach and remove the deciduous membrane with no danger.

I have used forceps, though not exactly the same form as spoken of, but the objection is that we cannot be sure with any form of instrument whatever that the uterus is empty. The finger alone tells us that. It is not only a therapeutic but a diagnostic appliance. It must be very rare for the uterus to possess the power to expel the ovum unaided, and then fail to take care of itself. There must be some special morbid condition to which the hemorrhage is due. In the case narrated by Dr. Slocum, with its history of frequent miscarriages, I should have suspected a polypus.

I do combine the use of ergot with the tampon, should the latter be insufficient when the ovum is intact, especially if the

ovum is intact to give a smooth mass on which to contract. Antiseptic injections are indicated after such a pathological process as a miscarriage. I doubt if the uterine cavity usually closes air-tight after such a process. Not infrequently there is a separation of the uterine from the foetal layer of the placenta with adhesion of the uterine portion. This adherent maternal layer is liable to give rise to septic inflammation and general infection.

The patulous condition of the cervix is, to some extent, an evidence that the uterus is not empty, but the reverse does not hold good. It would be unsafe to conclude that everything had been expelled because the os was found to be contracted.

OVARIOTOMY.

BY

J. H. W. CHESTNUT,

M. D.

PHILADELPHIA.

Report of a Case to the
Philadelphia County
Medical Society,
June 17, 1888.

Under the benign influences of antiseptics, the recent progress of abdominal surgery has been so remarkable and the number of ovariotomies has been so considerable, that this

case is reported not because of special characteristics, but rather as a further demonstration or exemplification that the operation in question has been removed from the border-land of doubt and has become one of those which the general practitioner, who does surgical work, may, under proper circumstances, essay to perform.

On November 10, 1887, Mrs. J., æt. thirty-seven years, a small woman weighing one hundred pounds, the mother of two children, the younger six years old, consulted me in reference to an abdominal enlargement which occasioned her uneasiness. Her periodical sickness was regular but scanty; she had nausea and was much distressed by frequent and at times ineffectual efforts at micturition.

A careful examination of her abdomen by palpation revealed a tumor about the size

of a large apple which inclined from the left to the middle and seemed to be solid. A vaginal examination gave a movable womb, a firm os and conjoined manipulation assuring me that the case was not one of pregnancy; the uterine sound was used and gave a measurement of 2.7.

Under the impression that the nausea and irritation of the bladder were due to pressure, a supporting bandage was ordered and small doses of thymol (gr. $\frac{1}{5}$ th) and ext. belladonna (gr. $\frac{1}{20}$ th) were prescribed. On November 20th I saw the case again; the general abdominal swelling had materially increased, the special tumor was larger; but the nausea and the difficulty of urination were less. After a second examination it seemed clear that the tumor was ovarian, but in the belief that under the circumstances operative measures were not for the time demanded, it was determined to try the efficacy of medicinal treatment as recommended by Courty, who cites two well-marked cases of recovery. Chloride of gold and sodium, iron in various forms, iodide of sodium, iodide of potassium, and arsenic were given internally; to these were added inunctions of iodide of lead, iodide of potash, belladonna, and graduated pressure by rubber bandages. These efforts were successively tried without success. In fact, I am disposed to believe that the methods pursued were rather injurious generally than otherwise.

The tumor enlarged rapidly and the general health of the patient depreciated. On December 6th she had a violent chill ushering in a peritonitis of grave severity accompanied by great dyspnoea. The peritonitis finally yielded to a large blister 8x8 inches and the internal administration of calomel and opium. After the subsidence of the acute inflammatory symptoms, a persistent nausea with occasional attacks of diarrhoea protracted the convalescence. She was able to go about the house by the middle of January, 1888; but was rarely without dragging abdominal pains, was unable to sleep well,

had frequent attacks of dyspnoea, and in consequence of impaired digestion as well as because of the inroads made on her vitality by the growing cyst, her emaciation became marked. On several occasions a suppression of urine due to pressure on the ureters or on the kidneys was a serious complication; dry cups to the lumbar region and along the groin, followed by hot mush poultices, were effectual in relieving the condition. She declined an operation.

On March 3d a second attack of peritonitis threatened to terminate the case; it was treated by anointing the now large abdomen with oleate of mercury and extract of belladonna, one drachm of the latter to one ounce of the former, and by full doses of opium by the stomach. The patient was able to leave her bed in ten days and agreed to an operation for removal at the earliest practicable time. The preparatory treatment consisted in the administration of syrup of the iodide of iron, the use of Murdock's liquid food, meat juice, milk and milk punch, in addition to such table food as she could take. Her digestion was assisted by pepsin in acid solution. The whole body was well rubbed once daily at bedtime with a mixture of sweet oil and whiskey, and her belly was anointed once a day with belladonna ointment, which, at least, was a source of great comfort. The bowels, which had become torpid, were regulated by drachm doses of extr. cascara sagrada, supplemented by an occasional enema. The sluggish kidneys were stimulated by dry cupping and by small doses of digitalis, which also exerted a favorable influence on the shortness of breath.

The determination of a limit of necessary endurance may have by some psychological influence stimulated the vitality and so seconded the nursing and feeding that the general condition materially improved without cessation in the progress of the cyst or favorable change as to emaciation. April 11th was the time fixed for the removal of the cyst; the abdomen was then larger than it

should have been in a pregnancy at full term; fluctuation could be elicited, but was not so marked as the distended abdomen would have suggested; the face, neck, chest, and limbs were very thin; and the skin, notwithstanding its sedulous care, was somewhat harsh. The direct preparations were simple. On the 9th her room was cleaned and lime-washed, and all furniture save the single bed removed. A solution of carbolic acid was kept simmering on the stove. On the morning of the 10th a glass of hot lemonade with a teaspoonful of heavy magnesia was given, fasting, and in the afternoon she had a dose of castor oil, followed, after several free evacuations, by one grain of opium. On the morning of the 11th she was washed, had a bowl of boiled milk for her breakfast, and at eleven o'clock a tablespoonful of brandy and thirty drops of tincture of opium.

The antiseptic measures were a solution of bichloride of mercury 1 to 2000, used to wash the abdomen; two pounds of a 95 per cent. solution of pure carbolic acid, from which dilutions were made 1 to 30 for instruments and sponges, and 1 to 40 for use within the abdominal cavity; a solution of thymol 1 to 1000 used to spray the abdomen before closing; and some finely powdered iodoform with a good supply of salicylated cotton.

The kitchen table and a backless chair completed the arrangements. After the patient was under the influence of the ether, my friends, Dr. A. H. Hulshizer, Dr. W. H. Hech and Dr. William C. McFetridge, entered the room. Dr. Hech assumed charge of the ether, Dr. Hulshizer assisted me throughout the operation, and Dr. McFetridge took charge of the antiseptic solutions, gave the hypodermatic injections hereafter mentioned, and had the care of hot bottles, etc.

The abdomen was well washed with the bichloride solution. After making the usual incision of about three inches through the

abdominal walls, opening the peritoneum, and pushing aside a fold of omentum, the wall of the cyst was seen. As was expected, a sound introduced between the cyst wall and the peritoneum revealed extensive adhesions, and the incision was at once enlarged to about six inches. Such of the adhesions as would not yield to the finger (and they were many) were tied with carbolized catgut ligatures and cut close to the cyst. Even after all adhesions within reach had been severed the tumor seemed barely movable. It was evident that the walls were thick and fleshy in parts, and that the contents of some of the divisions were at least semi-solid. A trocar and canula with angular attachment for gum hose was plunged into the most prominent and apparently the largest division low down. After approximating the wall of the cyst to the canula as closely as possible, about a bucketful of thick brown fluid was run off; when the liquid ceased to flow, the sack was pulled out of the cavity as far as possible, a ligature thrown around the opening and tied. The evacuation of and traction upon this cyst enabled me to reach deeper adhesions which were treated as before, and then a second cyst or cystic division was emptied by the canula. I was then able by persistent manipulation and the severing of other adhesions to eventrate the mass, the pedicle was pierced by a small flat needle carrying a double carbolized silk thread; each half was tied separately and the ends of the thread brought around the body of the pedicle and tied again. The pedicle was cut about three-quarters of an inch from the ligature; it was well washed, dried and dropped into its bed.

There remained to see that no oozing occurred, to clean and to close the abdominal cavity. There was almost no oozing. The cavity was carefully sponged out, and an almost hot spray of the thymol solution was thrown in, the folds of omentum which had been wrapped in a hot napkin (occasionally changed) were replaced, and the wound was

closed by eight silver sutures, each enclosing the peritoneum. Over the line of incision a moist piece of lint, spread with iodoform, was placed and held in place by three broad strips of adhesive plaster, then a pad of salicylated cotton, and over all a bandage of double flannel. The bladder was emptied and the patient put in bed.

During the operation a hypodermic injection of sulphate of atropia in a drachm of whiskey was given once when the respiration became alarmingly feeble, and another of a drachm of whiskey alone was given at the conclusion of the operation.

I may note a little misadventure that afterward proved troublesome. One of the hot bottles placed at the patient's side to maintain heat must have slipped for a moment under her buttocks, and been the initial irritation of a bed-sore.

The subsequent nausea was a little obstinate, it continued during the first twenty-four hours, and yielded either to the returning vitality of the stomach or to the external application of an ice-bag and the internal administration of one-quarter of a grain of cocaine given every three hours for four doses. The nurse was instructed in the use of the catheter, and used it for the first eight days. The diet was restricted for three days to beef-juce with brandy, and oat-meal gruel, with apollinaris water to drink. After the fourth day, there being no nausea and no fever (the temperature was never above 100.5°), a gradual return to a generous diet was permitted. The bowels were moved on the sixth day by enema, after a dose of castor oil.

About this time complaint was made of the bed-sore. I found it on the right buttock with an ugly looking slough. The slough was cut out, the cavity washed with carbolic acid solution, and filled with finely powdered charcoal, covered with adhesive plaster. It was well washed out daily with a syringe and refilled until it healed by granulation. This was the only untoward

symptom or circumstance following the work. The bowels assumed a regular action, and the bladder, glad to be free from the unwelcome catheter, behaved better than it had done for months. With a good appetite satisfied, the continuance of the sweet oil and whiskey bath daily, and the tonic influence of hope, assured every day added strength to the patient. Four weeks after the operation she went to Salem, N. J., to recuperate further, and I am advised that she is quite well.

In looking over the case, it may be questioned why I did not tap for relief. The temptation to do so was great, but independently of the danger of the procedure, which might have been considerable, it could only defer what should be the termination of the case. Tapping could not even promise with certainty considerable relief, for the fluctuation was not very marked; it might strengthen the patient's disinclination to have the cyst removed, and it was at variance with my position to half-way measures after a definite conclusion had been reached. I did not weigh the mass and contents, but I was assured by the patient's husband that the fluid and solid material weighed fifty-seven pounds. After removal the smaller divisions were opened and found to contain a semi-solid brown substance, which could be pressed out. The cyst walls were thick and fleshy in parts, and thin and softened in other parts. My friends agreed with me that the cyst would, at no distant day, have ruptured.

Of such a work it may be said that the gravity of possible consequences, the traditions of the past, and the preceding grave symptoms have attached to it a formidable name, and an importance somewhat at variance with the simplicity of its performance and the proportion of good results. The busy practitioner has daily on his lists cases infinitely more obscure as to character, more difficult as to treatment, and less hopeful as to results.

DISCUSSION.

DR. G. G. DAVIS:

I wish to take exception to the preliminary remarks of the reader, that his case demonstrates that it is right for the general practitioner to undertake this class of operations. I hold that no one should open the abdomen unless he is prepared for whatever may be found, and we know that the most experienced operators tell us that they cannot be positive in advance of incision, of the conditions that they will meet with. It may be, as here, a very simple matter, or it may be a very serious one. Only those who have had a certain amount of preliminary training and are prepared to follow up the operation by the most radical procedures if necessary, should do these operations. One case cannot be considered as establishing a principle.

DR. GOODELL: There is one point I wish to call attention to in connection with this graphically detailed picture of an ovariectomy, and that is the danger of having sloughs produced by hot water, to which the author has alluded. In a case of oöphorectomy for fibroma, of which I was cognizant, the flannel in some way became probably displaced from the hot bottles and two severe burns of the heels were caused, the recovery from which was more tedious than from the operation. One other little point. It is a mistake to introduce the trocar at the lower angle of the wound; for as the cyst empties, it collapses and may slip off from the trocar. The rule is to introduce it at the highest angle of the wound, so that it may have room to travel down with the collapsing cyst.

DR. CHESTNUT: The case was not presented as a single one to establish a rule, but as an additional illustration to the many on record, that under antiseptic precautions and under proper circumstances the general practitioner, who has confidence enough to do surgery at all, may also do an operation like the one reported.

PATHOLOGY AND HYGIENE.

SCROFULOUS
GLANDS AND
TUBERCULOSIS.

BY

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British Med. Journal.*

Some two years ago, while writing a brief article on scrofula and tuberculosis for a student's Manual of Surgery, my attention was drawn to the differences of opinion existing on the precise relation of scrofulous gland disease and af-

fections described as tuberculous. I found that some clinical teachers with large experience in diseases of childhood still maintained that the two affections were practically distinct, while among pathologists some taught that scrofula and tuberculosis were synonyms for the same disease; others that in scrofula the tuberculous virus was so profoundly modified as to constitute a special variety. The latter view was strongly supported by some experiments of M. S. Arloing, which appeared to prove that inoculation with material from scrofulous glands was innocuous to rabbits, while it produced general tuberculosis in guinea-pigs.

The significance of this assertion, if well established, is clear, when it is stated that material from true tuberculous diseases produces visceral tuberculosis in both animals. The results of these experiments seemed of so much importance that I was desirous of testing the matter for myself, more especially as Arloing, in his first two groups of experiments, had only used glands taken from one patient. Further, I had observed such remarkable differences in the naked-eye appearances of strumous glands that it would have been no matter for surprise to have found that two or more diseases had been grouped under a single heading. This could only be tested by making experiments with a series of cases. Structures microscopically characteristic of tubercle and

bacilli had been found in some glands; but in many others the histological appearances were indistinguishable from those of simple chronic inflammation, and might even simulate those produced by syphilis in other organs. For example, J. Arnold, who examined ninety cases, found giant cells very rare.

M. Arloing's experiments were, shortly, as follows: A juice was prepared from a single scrofulous gland, caseous in the centre, which was taken from a boy aged 14. This was injected beneath the skin of ten rabbits and ten guinea-pigs. Visceral tuberculosis developed in all the guinea-pigs, but the rabbits remained healthy, except that two showed yellow and caseous granulations at the seat of inoculation.

A second series of experiments were made with a gland subsequently removed from the same boy. The juice was injected into the peritoneal cavity of six rabbits and six guinea-pigs. As before, the guinea-pigs presented tubercular lesions; the rabbits on being killed, were found to be perfectly healthy. In two instances pus from strumous abscesses gave similar results.

Some glands excised from the neck of a young woman produced tuberculosis both in rabbits and in guinea-pigs, but the patient died three weeks after the operation from miliary tuberculosis. Arloing appears to consider this case as outside the general category of strumous glands.

From these experiments he inferred that either scrofula and tuberculosis were nearly allied affections, but caused by different agents, or they were derived from a single virus, of which the activity was modified in the scrofulous form.

In my experiments I used small fragments of the glands prepared with sterilised instruments, and the possibility of infection of the animals with true tuberculosis was negatived by the precautions taken. My experiments on rabbits are briefly as follows:

EXPERIMENT I.—Rabbit inoculated beneath the skin of both ears. Cold abscesses

formed at the seat of each inoculation, and remained stationary; but the animal continued well until the expiration of nine months, when, judging it to have escaped, it was re-inoculated in the peritoneal cavity.

EXPERIMENT II.—Rabbit inoculated in interior chamber of eye with portions of a non-suppurating gland. A large mass of caseous material formed and ultimately projected from the eye. Animal killed three months after inoculation. Tuberculosis of lungs and liver. Brain healthy.

EXPERIMENT III.—Rabbit inoculated in anterior chamber with portions of caseous material and adjoining gland tissue from a strumous gland. No growth formed in the eye. Animal killed in two months and a half. No disease anywhere. Sections were made of these glands, and, after careful staining, no bacilli could be demonstrated. The gland substance had become in great measure transformed into fibrous tissue.

EXPERIMENT IV.—Rabbit previously inoculated beneath the skin (see Experiment I), again inoculated in abdomen. Killed after lapse of eleven weeks. Three large caseous glands were found beneath and below liver, and in the latter were yellow threads and stripes, found, on microscopic examination, to be tuberculous. Lungs and other organs healthy. Pus containing many bacilli still existed in the abscesses of the ears but the visceral tuberculosis may probably be ascribed to the last inoculation.

EXPERIMENT V.—Rabbit inoculated in abdomen. Killed after lapse of four months. Tuberculosis of lungs; other viscera healthy. An enlarged lumbar gland.

Glands from four other patients were also used for inoculation of guinea-pigs, and each time with positive results. Altogether, glands from ten different cases, taken at hazard, were used; but in one (not cited above), in which a rabbit was inoculated in the eye, the animal died in twelve days, and only minute yellow nodules were found in the liver. The nature of these nodules could not be absolutely determined. Eight

of the remaining nine cases were all proved to be tubercular.

As regards the results of the experiments on rabbits with glands from five different subjects, the material from three cases produced visceral tuberculosis; from one case, cold abscesses; and in one instance (Experiment III), in which a rabbit was inoculated in the anterior chamber, it escaped infection altogether; no bacilli could be discovered in this gland. The animal in which cold abscesses occurred was inoculated beneath the skin.

I need hardly call attention to the marked manner in which these results differ from those of Arloing above described. While my experiments were in progress Arloing was pushing his somewhat further in the direction indicated by his first experiments. Believing that scrofulous glands never produced visceral lesions in rabbits, and that in struma the activity of the virus was attenuated, he sought to find if this could be increased by passing it twice through guinea-pigs. His experiments showed that the passage of glandular scrofula through the guinea-pig in two successive generations did not augment its virulence as regards rabbits. He also found that local tuberculosis of joints and bones only produced cold abscesses in rabbits, but, on passing the virus through a guinea-pig, tuberculosis of the lungs developed in rabbits. "This fact merits," he says, "to be taken into serious consideration at a time when there is a tendency to confound tubercle and scrofula as a single affection. It justifies once more the difference that we have established between the two morbid states. If it is not yet proved that they are the work of a distinct virus, it will be granted that true gland scrofula is yet more removed from the primitive virulence than local tuberculosis. Perhaps it is sufficiently removed to constitute a *fixed variety* analogous to those micro-organisms which, after having lived for many generations in a certain species of animal, have become incapable in conse-

quence (in spite of all known means) of killing the species which had furnished them and among which they made numerous victims."

These later observations I have also repeated, with equally dissimilar results.

EXPERIMENT I.—Two rabbits were inoculated respectively in the abdomen and anterior chamber of the eye with organs from a guinea-pig rendered tuberculous by strumous glands. The rabbit inoculated in the abdomen was killed two months after, and showed tubercles in the peritoneum covering the cæcum (opposite the abdominal wound), caseous lumbar glands, and tuberculosis of the lungs. The other rabbit died after the lapse of five weeks. The portion of tissue placed in the anterior chamber had increased, but there was no visceral tuberculosis.

EXPERIMENT II.—A rabbit was inoculated with portions of the lung of a guinea-pig rendered tuberculous with strumous glands. It died without apparent cause in eleven days; but a caseous abscess and some tubercular material had already formed in the groin, and there were numerous yellowish-white points in the liver.

EXPERIMENT III.—Two rabbits were inoculated in the abdomen with tuberculosis of a guinea-pig excited by strumous glands. One died in seven weeks and the other was killed. Both showed general tubercular peritonitis and general visceral tuberculosis.

In the first and third of these experiments, the virus was certainly intensified by passing it through the guinea-pig, for these are the most acute cases of tuberculosis I have been able to induce by strumous gland disease in rabbits, the tubercles being disseminated over the peritoneum (specimen shown).

Here are the intestines of a rabbit inoculated in the peritoneal cavity with military tuberculosis which had been passed through a guinea-pig, and it may be seen that there is very little difference in the result in each case (specimen shown).

It is difficult to reconcile the discrepancies between M. Arloing's results and my own. As in his first series he used glands from only one case, the virus may have been of an exceptionally mild type; or the failure of rabbits to take tuberculosis when the material was injected in solution into the peritoneum may, perhaps, be explained by the virus being absorbed immediately and destroyed by leucocytes. When introduced by small fragments of glands, as in my experiments, a certain amount of inflammation may be excited, and a more favourable nidus obtained for the growth of organisms. This was evident in cases of tubercular peritonitis, for in these a mass of gelatinous granulations on the inner surface of the wound in the abdominal wall formed the focus of infection, as shown by the distribution of the tubercles on the peritoneum.

The similarity in point of histological appearances between scrofulous and tuberculous lesions has formed the subject of several excellent memoirs. I have examined sections from most of the animals experimented on, and find no essential differences between them and the same lesions produced by the inoculation of military tuberculosis, only slight alterations in accordance with the acuteness or duration of the disease.

Like other observers, I have found tubercle bacilli, although in very small numbers, in strumous glands; but in abundance in those organs which I have examined from the rabbits and guinea-pigs inoculated experimentally. The bacilli in the visceral tuberculosis were generally uniformly stained with even outlines; but in the strumous abscess in a rabbit which had existed for eight months they were nearly all "beaded" or uniformly stained, and often collected in groups not unlike clumps of micrococci. These changes in the form of the bacilli in acute and chronic cases of tuberculosis have been noted by MM. Raymond and Arthaud.

In investigating the relation of strumous

disease to other forms of tuberculosis, it was necessary to consider the possibility of its belonging to the form of tuberculosis described as *tuberculose zooléique* by Malassez and Vignal, and which has also been observed by Eberth. This disease in its coarse anatomical characters cannot be distinguished from tuberculosis; but on investigating the lesions microscopically with appropriate reagents, the bacilli of Koch are not to be found, while at the periphery of the caseous centres of the nodules are dense masses of micrococci, usually distributed in zooglœa, but in part in chaplets. The precise relation of this disease to bacillary tuberculosis has not yet been determined. Malassez and Vignal discovered it in guinea-pigs which had been inoculated with a tuberculosis of the skin; and recently Chantemesse obtained the same disease by inoculating guinea-pigs with portions of sterilised cotton-wool, through which the air of waiting rooms used by phthisical patients had been passed. Malassez and Vignal incline to the opinion that zooglœic tuberculosis may coexist with the ordinary bacillary form. In their experiments bacilli appeared in animals inoculated with a third series of cultures of micrococci, of which each generation had been passed through a guinea-pig. It is even possible that the micrococci may be simply contaminations of bacillary tuberculosis. The subject, therefore, requires further investigation, especially in tuberculous products from man. With the reagents employed by the authors above mentioned I have carefully searched two specimens of strumous gland, and many diseased organs both from rabbits and guinea-pigs inoculated with strumous glands, but have found nothing like zooglœa, except in one gland. Here were some darkly stained granular masses, but the granules were not well defined, and disappeared when the field was fully illuminated by removing the diaphragm. They were probably nothing more than masses of granular caseous material.

In passing I may here state that I have much pleasure in confirming, as regards strumous glands, the observation of Mr. Treves, which has been combated by high authority, that many of the "giant cells" are clearly formed by lymph coagula lying in lymph sinuses. I may also call attention to a curious condition of the lungs of some guinea-pigs which had been inoculated with tubercle. They are studded with rounded cavities, some larger than a pea, and many of these projected beneath the pleura, looking like bullæ. On microscopic examination they appeared to be formed by the softening of the caseous centres of tuberculous nodules, and by dilatation of the minute bronchi. The occurrence of cavities in the tuberculous lungs of animals has been denied by Chantemesse.

To conclude, while I have shown that the virus of strumous gland disease produced visceral tuberculosis in rabbits as well as in guinea-pigs, yet I admit that the disease in rabbits is not so acute and rapidly fatal as that following inoculation with, for example, acute military tubercle. The difference is one only of degree, not of a kind permitting us to infer, with Arloing, that struma is a specialised form of the tuberculous virus. We must, therefore, fall back on another explanation of the clinically innocent course of strumous gland disease; and we find it probably in the locality or soil in which the virus is implanted. Taking cervical gland disease, if the virus is not inherited from a consumptive or strumous parent, it may be surmised that the common bacillus of phthisis implanted in the lymph follicles of the pharynx or tonsil, in one of the adjoining mucous membranes on the skin, and is carried direct to the glands. These, acting as filters, arrest its progress permanently, except in some cases in which suppuration and ulceration take place, when the surrounding textures may become implicated, and general dissemination ensue. The malignancy of the virus may be somewhat attenuated under the local influence of the

lymph cells and leucocytes in the gland, but to admit that the virus producing the disease is *ab initio* specialised, would be to infer that the strumous disease could only be produced by the virus of struma, and no other.

In conclusion, I would emphasize the objections to the use of the terms "scrofula" and "struma" for lesions resembling tuberculosis.

Teachers must often be asked by students as I have been, What is the difference between a strumous and a tuberculous testicle?

Further, any evidence tending to connect more closely strumous gland disease with general tuberculous affections encourages to persevere in the practice of early operation (where possible) with the view of completely eradicating the disease.

SALOL

IN ACUTE RHEUMATISM.

SALOL IN ACUTE RHEUMATISM.	J. R. Bradford (<i>Lancet</i> , i. 1072) reports his experience with salol in about sixteen cases of acute rheumatism, all of average severity, with considerable fever. After detailing some of them, he concludes that, as an antipyretic, salol is decidedly efficacious in rheumatic fever, but only after three or four days, and when ten grains every hour are administered; and it is not quite so reliable as salicylate of soda. To relieve the joint pains it is decidedly inferior to salicylate of soda, both in certainty and in rapidity. Relapses occurred as after the salicylate, but yielded to increased doses of the drug. It produces the characteristic toxic symptoms of salicylic acid, though to a less marked degree. The same fact explains the less degree of the other toxic symptoms.
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The author concludes that the efficacy of salol depends purely on the contained salicylic acid, and that salicylate of soda is on every ground to be preferred to it.

We doubt if American physicians will agree with Mr. Bradford. The efficacy of salol is certainly dependent on the salicylic acid, still there is many cases which will not tolerate either salicylate of soda or salicylic acid. Salol is much more likely to be tolerated by the stomach, and in most cases just as effective.

BOOKS AND PERIODICALS.

THE INFECTIOUS DISEASES.

VOLUME I.

BY KARL

LIEBERMEISTER.

TRANSLATED

BY E. P. HURD,

M. D.

The Physician's Leisure Library, No. 8.

George S. Davis, Detroit,
1888. Price 25
cents.

The first chapter is devoted to a general consideration of those miasmatic diseases called malaria. In considering the etiology of the subject, Crudeli's bacillus is accepted as being, in all probability, the specific cause of the malarial affections. The plasmodium malariae of Laveran no-

where receives attention, notwithstanding the fact that more than a year prior to the date fixed to the preface of this work (April 1, 1888), Prof. William Osler, of Philadelphia, Dr. George Sternberg and Dr. William Councilman, of Baltimore, had published in the *American Journal of Medical Sciences*, in the *Medical News* and in the *Medical Times*, of Philadelphia, experimental observations confirmatory of Laveran's discovery. It is difficult, therefore, to understand how, even though Liebermeister may have been ignorant of this, the translator, Dr. Hurd, should have overlooked it. There can be little doubt that we have a large number of widely different varieties of malarial diseases, each dependent upon a specific cause. The paroxysms of periodical diseases, most likely, depend upon the evolution of the infecting material; and whilst this contribution may be looked upon as the first step in the attempt to substitute experimental observation for the old-time system of classifying diseases by their symptomatology and clinical course, regardless of the causes which may have induced them, it is much to be deplored that a translator for an English-speaking nation should not also translate into the language of the country such terms as "kilogrammes." It is pleasing to note, however, at page 14, in speaking of the temperature during the paroxysmal

stages of malarial diseases, that the temperature recorded by Liebermeister, who uses the Centigrade thermometer, is translated into degrees of Fahrenheit's scale. Under the head of "treatment" it is claimed that good results have been obtained in Italy, Spain, Algiers and Palestine by planting the eucalyptus globulus; and in portions of Central Europe, where the tree cannot grow in the open country, a good substitute is said to be the common sun-flower. The prophylactic value of the eucalyptus and the sun-flower are said to reside in their powers of excessive absorption of water through their roots, by means of which a dryness of the soil is promoted. It is perfectly absurd to suppose that any advantage, by the way of preventing the growth of malarial miasmas, may possibly result from the presence of one kind of trees more than another. All trees tend to promote, not a dryness of the soil, but a moisture of the soil. This may be demonstrated by digging around the roots of trees of every description in dry seasons of the year, when it will be found the greater moisture of the soil exists in the vicinity of a tree than at a distance from it, and this by reason of the fact that great quantities of water, in rainy seasons, are conducted deep into the earth by the sides of the roots, the roots, of course, making such openings as more readily to admit the passage of the water, and the facilities for evaporation being diminished by the shade of the branches of the tree, shutting out the sun's rays, in great part, from the surface. The translator has taken pains to make such additions to different portions of the work as to afford a fair representation of American practice in the treatment of malarial affections; and so the work may be taken, in the main, as a fair representation of the generally accepted views of the profession concerning those infectious diseases known as malarial affections and typhoid fever.

The second volume is devoted to a consideration of contagious diseases, as measles, scarlet fever, small-pox, varicella, rubella

and diphtheria. Varicella is an unfortunate term. Technically, it means "little small-pox." Hebra so regards it, and says that devastating epidemics of variola have occurred from comparatively mild cases of varicella. For the purpose of inoculation, says Hebra, no one used lymph taken from cases of variola vera. The terms chicken-pox, horn-pox, swine-pox, etc., should be abandoned as vulgar names for a variety of cutaneous eruptions, the origin and nature of which, it must be admitted, are unknown, or they should be classified with some reference to their cause and anatomical characters. John Hughes Bennett, of Edinburgh, used the term varicella as identical with small-pox, and, like Hebra and many other writers, simply to designate a mild type of that disease. Writers on dermatology all take pains to state that the eruption called varicella bears a striking resemblance to that observed in the mild types of variola; and it is only by watching them through their whole course that the distinction is to be made. Rubella is the term chosen to represent Rötheln (German measles). Rubella would appear to be a severe type of rubiola. The chapter on diphtheria is one of the most interesting features of the whole book.

Altogether, these little manuals possess considerable interest, not to say original merit.

THE LAN-
GUAGE OF
MEDICINE.

BY

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and Therapeutics, Med-
ical Department Ni-
agara University.

D. Appleton & Co., New
York, 1888.

The object of the work is said to be to furnish the medical student with a suitable means for acquiring the vocabulary of his science. The correct definition of the word "science" is, truth established. Surely medicine, in the broad

sense of that term, is in no way entitled to be called a science. There are many sciences which have contributed somewhat to the

enlargement of the domain of general medicine, and served the purpose of opening up new fields of study.

However important the Greek and Latin may be to the medical student, it is, nevertheless, important that some attempt be made to separate the known from the unknown in medical literature. To establish a sort of medical language, or, rather, to systematize the technology of medical literature, seems to have been Dr. Campbell's aim. The history of medical terminology offers many attractions to the student. The orthoëpy of medical technology receives well-merited attention, whilst the classified list of words commonly mispronounced cannot fail to interest the reader and instruct the student. The declension of medical nouns, embracing those of Greek and Latin origin, has been skillfully and ably elucidated. Dr. Campbell assumes all indeclinable nouns as being of the neuter gender, and he treats them as though they were Latin nouns of that gender. The chapter on the declension of adjectives stamps Dr. Campbell as an ingenious and practical scholar. He has the happy faculty of arranging a very disorderly set of words into a very orderly system. The work has such intrinsic merits as to make it a necessary companion for reference to every student of medical literature. An attempt to enter into a critical analysis of its several parts seems useless.

The work of the publisher has been extremely well done, and the number of typographical errors are fewer than in most works.

DENTAL
ASSOCIATIONS.

The American and
the Southern Dental
Associations will hold

a joint session in this city August 28, 29 and 30. The Association of Dental Faculties will also meet here August 27. This will be the largest meeting of dentists ever held. They extend a cordial invitation to the medical profession of the city to meet with them.

CORRESPONDENCE AND SOCIETIES.

KENTUCKY
STATE
MEDICAL
SOCIETY.

The Thirty-third Annual Meeting, held at Crab Orchard Springs, Ky., July 11, 12, and 13, 1888.

The Society met at Crab Orchard Springs at 3 o'clock P. M., July 11th, 1888. The President, Dr. John G. Brooks, of Paducah, called the meeting to order.

On motion the reading of the minutes of the last session was dispensed with, printed copies of which had been distributed through the hall.

Dr. E. R. Palmer, Chairman of the Committee of Arrangements and Credentials, said that it was the custom of the chairman of this committee to deliver an address, but as it was a custom more honored in the breach than the observance, he should make no speech. He requested members and visitors to be careful to get certificates, by means of which to insure reduced fare, arrangements having been made with the railroads in this State and Indiana to bring physicians and their ladies at reduced rates.

Dr. Palmer announced that he had selected as his associates on the committee Dr. H. Brown, of Hustonville; Dr. E. M. Wiley, of Harrodsburg; and Dr. W. W. Cleaver, of Lebanon, leaving the fifth place to be filled at the meeting of the committee.

The Committee of Arrangements and Credentials then retired to consider applications for membership.

The Treasurer, Dr. Edward Alcorn, of Houstonville, thereupon read his report, as follows:

MR. PRESIDENT AND GENTLEMEN: As Treasurer of the Kentucky State Medical Society, I report finances of the Society at present date, July 11th, 1888, as follows:

To cash received at Paducah, June 1887 \$237 75
Received from Secretary Letcher, which consisted of funds collected

by him at Crab Orchard Springs in June, 1885 183 50

\$421 25

To cash received from delinquents . \$15 00

\$436 25

PAID OUT.

Secretary's salary \$100 00
Money advanced by Sec'y. 20 75
Rogers, Tuley & Co.
(printing) 33 34
Walton (printing) 14 50
R. J. Dingleson (International Congress) 250 00
Stenographer 20 00
Page (at Paducah) 2 00 440 59

Overdrawn \$ 4 34

ED. ALCORN, Treasurer.

The Treasurer's report was received and approved.

On motion of Dr. Edward Alcorn, the Permanent Secretary was directed to reimburse himself out of the funds in his hands the amount he had advanced for the society, it appearing from the Treasurer's report that he had paid out more money than he had received by \$4 34. The Secretary explained that the sum named was due to the Farmers' National Bank of Stanford, he having overdrawn the account to the credit of the Society that much.

The Committee of Arrangements and Credentials reported favorably the following gentlemen for membership: Drs. E. B. Scribner, W. L. Rodman and H. M. Pusey, of Louisville; Dr. W. H. Roach, Salvisa; Dr. J. W. Gilbert, Lawrenceburg; Dr. F. D. Green, Bloomfield, and Dr. A. G. Lovell, Mt. Vernon.

Dr. J. N. McCormack, of Bowling Green, moved that the rules be temporarily suspended and the Secretary directed to cast the ballot of the Society for the above-named gentlemen, which was done, and they were declared duly elected.

The Chairman of the Committee of Ar

rangements and Credentials now declared Dr. A. G. Lovell a member of that committee.

Dr. Palmer then presented to the Society Drs. George Ryan, E. S. McKee and W. F. Buckner, of Cincinnati; Dr. John L. Gray, Permanent Secretary of the Mississippi Valley Medical Association, Chicago, and Dr. Cooper of Kansas City, Mo. By a vote of the Society they were all extended the courtesies of the floor.

The Permanent Secretary, Dr. Steele Bailey, then presented the following report, which was approved:

MR. PRESIDENT AND GENTLEMEN: The expenses incurred by the Secretary for the past year have been fourteen dollars and thirty-five cents (\$14.35), as shown by bill here appended. The duties of the office have been discharged faithfully, and I trust satisfactorily, but about their performance you are the better judge.

A day after the programme was printed, Drs. McKee and Ryan, of Cincinnati, sent me titles of papers they desired to read before this Society, the former, "Obstetrics in London," the latter, "Richitic Deformity."

The members of the Society may congratulate themselves upon the continued good health of its members. But one death has been reported at this office, that of Dr. W. G. Ouchterloney, of Louisville.

STEELE BAILEY, *Secretary*.

It was moved that, as the papers of Drs. Ryan and McKee, of Cincinnati, got in too late to be placed on the printed programme, out of deference to these gentlemen, they being guests of the Society, they be given the first vacant places. An amendment to this was offered and accepted referring the matter to the Committee of Arrangements and Credentials, and it was ordered to be so referred.

Dr. E. R. Palmer, Chairman of the Committee of Arrangements and Credentials, said that the rules of the Society required that just before each session the committee

should arrange a programme for that session, and in that way the programme would be arranged from session to session, and the committee would report a programme for the afternoon session.

Dr. W. O. Roberts, of Louisville being called upon to report on Progress in Surgery, read a paper on a case of nephrectomy, or entire removal of the kidney, followed by recovery. A very large tumor which he removed was exhibited to the Society.

Dr. A. W. Johnstone, of Danville, in discussing Dr. Roberts' paper, said that in abdominal work everybody knew practically how indefinite the diagnosis always is until you cut into the abdomen; and, as an illustration of this, he presented two cases.

Dr. E. R. Palmer asked Dr. Johnstone what fluid he used in cleansing the cavity. He answered, warm water.

Dr. Roberts, closing the discussion, said he believed he had nothing further to say.

MEDICAL POLITICS.

There are factions in medicine in Kentucky as well as elsewhere, and when the report of the Nominating Committee was brought in, there was war almost to the knife. The chair was unable to decide on the vote on the adoption of the committee and a rising vote was called, and this was followed by the calling of the roll. The result was the rejection of the report of the committee by a vote of 26 to 29, followed by loud and prolonged cheers. The President felt affronted at the unprecedented action of the Society in rejecting the nominations of the committee, which was of his own creation, and refused to appoint another. After considerable discussion the matter was referred to the committee to report again. The committee after six or eight hours came together, held a short session, and reported to the Society the very same names for officers it had proposed before.

Motion was made to adopt the report of

the committee, and was adopted by a roll-call vote of 26 to 19.

Dr. Yandell rose to a question of privilege, and in a very bitter speech, in which he accused members of holding office above that which was higher than honor, offered his resignation.

Dr. William Bailey, of Louisville, offered his resignation as First Vice-President. Accepted.

Dr. John G. Cecil, of Louisville, offered his resignation of the office of Treasurer, which was accepted. Several gentlemen rose to a question of privilege, some acrimonious remarks were made, and matters began to look rather fiery in this "dark and bloody ground;" but some gentleman was thoughtful enough to call for the resumption of the order of the day, and it was done.

The report of the Nominating Committee was adopted and the following

OFFICERS ELECTED:

President, Dr. L. S. McMurtry, Danville; First Vice-President, William Bailey, Louisville; Second Vice-President, B. W. Stone, Hopkinsville; Permanent Secretary, Steele Bailey, Stanford; Assistant Secretary, S. M. Letcher, Richmond; Treasurer, John G. Cecil, Louisville; Librarian, T. B. Greenly, West Point; Censors, H. Brown Houstonville; H. B. Evans, Riley Station; F. H. Clark, Lexington; Chairman of the Committee of Arrangements, J. M. Foster, Richmond, with authority to fill vacancies. Richmond was chosen as the next place of meeting, and the date the second Wednesday in May.

An Amendment to the by-laws was offered, taking from the President the appointing of the Committee on Nominations, and making it consist of one from each county represented and four from Jefferson (Louisville).

Dr. J. G. Carpenter, of Stanford, rising to make his report on Dilatation of the Sphincter Ani, said he was sorry to have left his paper behind, but would give a few

points so that it could be discussed by Dr. Mathews. He said that having once been a victim himself, he felt like the subject being discussed for the benefit of the young practitioner. He said that the etiology of the subject of stricture of the sphincter ani might be considered from several points of view. He believed that stricture of the sphincter ani is due in a great many cases to constipation. When the infant becomes constipated the rectum gets to be in an irritable condition; and as the child advances through life, the girl or boy goes to school, and follows sedentary habits, and the constipation is reproduced until piles, fistula or ulcer take place, and by giving proper attention in childhood the spasm of sphincter ani can be prevented. Sedentary habits are likely to bring on stricture of the sphincter ani, and then sedentary habits and alcoholism bring on a local congestion of the rectum, and then it comes on reflexively. He had seen a case of stricture of the rectum, where it was impossible for him to introduce his little finger into the anus. He performed lithotomy, and the spasm gave way in due time. And in displacements of the womb he had seen the most intense spasms of the sphincter ani brought on, so much so that the case had been pronounced cancer of the rectum, but by the replacement of the womb and by giving hot water injections, the spasm of the sphincter ani subsided. He said he could give numerous cases like that which have been relieved in the same way. He had seen the most intense pain in the sphincter ani brought on by rectal polypus and a stricture; and by divulsing a sphincter muscle the stricture was removed and the patient was cured without any treatment except the application of hot water. He said that his practice was to divulse the sphincter ani until it yields; but Allingham, in addition to that, divulsed it until it was soft.

Dr. Mathews, of Louisville, said that he would occupy the time of the Society but a moment, as this was literally the tail end of

this session. He had been interested in this subject for a number of years and was sorry that Dr. Carpenter did not have his paper here, so that he could give a more elaborate discussion of the subject. In a word, he said he could not agree with the etiology of the subject the doctor had given; he used the word stricture of the sphincter muscle. He had never seen that condition. Stricture means a pathological change of structure in the coats of the gut and a disposition to continuous contraction and ultimate stenosis by reason of traumatism or idiopathic hypertrophy from the deposition of lymph; but when the doctor referred to stricture of the sphincter muscle, by which the voluntary contraction of the muscle might be seen in the condition he has mentioned, I felt some astonishment. Muscular contraction is in no sense like the original disease known as stricture. Prof. Goodell, at the meeting of the American Medical Association at Cincinnati, thought proper to read an elaborate paper on the hysterical rectum, and made very plain the distinction between spasm and stricture. Dilatation of the sphincter muscle is called for only in certain conditions. In irritation of any kind the dilatation of the sphincter muscle should be performed oftener than it is, but it should not be done recklessly.

Dr. L. S. McMurtry, of Danville, read a paper on The Treatment of Peritonitis by Abdominal Section and Drainage. The subject was illustrated by cases from the author's practice. The first case was that of a lady aged sixty years, in which a diagnosis of ovarian cyst had been made. On opening the abdomen the case was found to be one of cystic dropsy from tubercular peritonitis. The adhesions were separated and the fluid evacuated; the peritoneum was then thoroughly cleansed. At the time of operation the patient was confined to bed, emaciated and feeble, with daily vomiting. She made a prompt and uninterrupted recovery from the operation, the appetite returned in a few days and her strength was

rapidly regained. The speaker read a letter from the patient's daughter stating that at the date of writing, almost a year after the operation, the patient has had no return of her former symptoms, and that her health is excellent. Another case of tubercular peritonitis was related in which the speaker performed abdominal section as an exploratory measure. The patient was a young woman, and elevated temperature, emaciation and rigors suggested an intra abdominal abscess. Her condition was extreme when the abdomen was opened. The peritoneum was studded with miliary tubercles, and the inflammation was so acute that lymph was deposited liberally. Thorough irrigation with hot water and the insertion of a tube completed the operation. He read a letter from the patient's physician within a few days since, almost one month after the operation, stating that the patient was at once relieved from pain by the operation, and that all her symptoms were improved.

The speaker claimed that this case illustrates the fact that relief from pain and freedom from opium would of itself justify abdominal section and drainage in such cases, but beyond this the operation gives hope to a case otherwise beyond our aid. In reviewing the literature of abdominal section in tubercular peritonitis, he mentioned the historic case of Sir Spencer Wells, in which twenty-three years after the operation the patient was in excellent health. He also alluded to the result recorded by Dr. E. Van de Warker in a similar case. At the Congress of German Surgeons last fall Kuemmell, of Hamburg, reported thirty cases of tubercular peritonitis treated by abdominal section. Other Surgeons present in discussing the report added six more cases, making thirty-six cases with thirty recoveries. In some instances the peritoneum was treated with tincture of iodine; some with a solution of bichloride of mercury 1 to 5000; others by dusting iodoform over the peritoneal surface. It seems to be un-

important how the peritoneum is treated so it is opened, evacuated and cleansed. No explanation as to how the operation produces these results is satisfactory. In the majority of cases the pathological condition was not recognized until after the abdomen was opened.

The speaker then illustrated by cases the advantages of abdominal section and drainage over all other methods in the treatment of suppurative peritonitis. In one case the patient had suffered for years with pelvic pain and sub-acute peritonitis caused by disease of the ovaries and tubes. The operation for removal of the appendages was advised but refused by the patient until her life was in immediate peril from septic peritonitis. The abdomen was opened, and amid universal adhesions a large, disorganized blood-clot was found in Douglas' space. The appendages were removed with great difficulty on account of old adhesions, and the peritoneum cleansed by irrigation. Three weeks afterward, when the patient was about convalescent, she was again attacked with septic peritonitis. The abdomen was opened the second time, and a drainage tube introduced. The tube was kept in the abdomen for twenty-eight days and drainage supplemented by almost daily use of Seidlitz powders. The patient made a complete recovery. The speaker declared that the indications for operation in these cases are exactly those of an abscess in other parts of the body, only adding that delay is fatal. If we succeed in these cases we must act with decision and operate early. There is every reason to believe that if done in time abdominal section, irrigation and drainage will rescue these terrible cases of perpetual peritonitis, which have hitherto been consigned to opium euthanasia. In conclusion, the speaker advocated continual irrigation in cases of abdominal section for purulent peritonitis. Adhesion of the coils of intestines interferes with drainage, and by filling the abdomen every few hours with hot antiseptic fluid he believed the periton-

eum could be more thoroughly cleansed. By the insertion of several tubes the entire peritoneum could be flooded with water every few hours.

Dr. W. H. Wathen, of Louisville, said that he had been very much impressed with the report; the results were indeed gratifying, and bore testimony to the correct method of treatment pursued. The speaker was interested in the subject especially because he had been studying the literature relating to it very closely, and had recently observed the reports of operations that were of great interest. He thought that it was possibly demonstrated that abdominal section in tubercular peritonitis was the correct treatment that one could expect good results from. Laparotomy in septic peritonitis was attracting the attention of the gynæcological surgeon; but whether it was to be followed by results comparable in success with those following abdominal section for tubercular peritonitis, experience alone must decide, as but few operations had been performed. But, if there was a legitimate field for experimentation to develop the value of a surgical procedure to cure disease, it was admissible here; for the reason that septic peritonitis was nearly always fatal in a very short period, it mattered not in what form the disease arose. When puerperal peritonitis was well developed, and there was well-marked tympanites, the disease tended almost certainly to death. He believed that here was a legitimate field for the gynæcological surgeon to give abdominal section a test. The speaker had recently, in consultation, witnessed a case of this sort, in which he could only advise, and in which he regretted that the operation had not been performed, because the case was otherwise incurable, and the opening of the abdomen might have cured the patient. He desired to call attention, however, to the reckless haste of many members of the profession to open the abdomen in cases where the operation was in no sense indicated, the operator being ignorant of the pathology or diagnosis of the

disease, and controlled by an ambition to record another case of abdominal surgery. Success in abdominal work was certainly the crowning glory of modern surgery; but there was not a man in the medical profession of extended experience relating to this subject, or who had read its literature, who was not familiar with the fact that the abdomen was cut open by persons who were not familiar with the pathological conditions that existed within the abdominal or pelvic cavity, and who were incapable of making a perfect diagnosis.

Where the operation to remove a tube or an ovary was not positively indicated, it could do no good, and might result in the untimely death of the patient; and there was no other department of abdominal surgery that was carried to such an extreme. He referred especially to cutting open the abdomen to remove healthy tubes and ovaries, because there were a few vague neurotic symptoms which had not yielded to an imperfect treatment; or to cure epilepsy, which had no direct or positive relation with the generative organs—the destruction of the distinctive organs of a woman to satisfy an imperfect diagnosis and a faulty pathology or the ambition of the operator; the removal of an important part of woman's machinery, which regulated the symmetrical and harmonious action of the various organs of her body; a woman's life, as it had been expressed by Dr. Jackson and Dr. Bigelow, poised between heaven and earth, without the possibility of doing any good; a woman's life sacrificed on the operating-table.

Now, the trouble was, men were attempting to do abdominal surgery without the preparation for it. No man should perform laparotomy until he had acquired a correct knowledge of the symptomatology, diagnosis, and pathology of all the diseases of the pelvic and abdominal cavities, and acquired a knowledge of the technique of the operation. To open a woman's abdomen was a simple operation; but it was important to know when to open it and when not to open it;

to know how to deal with the pathological conditions one might encounter. He doubted whether there was one case in a hundred of removal of healthy ovaries or tubes that was a justifiable operation. The removal of healthy ovaries or tubes to cure epilepsy or vague nervous diseases not referable to irritation of the pelvic organs was not more consistent than the castration of a man for similar purposes; but who would have the hardihood to do the latter under such conditions? The statistics of these operations were faulty. The successful operations were usually reported too soon to judge of a permanent improvement; the patient might improve for a while, but then relapse into a worse condition than existed before the operation. It was well known to surgeons that many persons felt temporarily improved from the mental shock or impression of a surgical operation. These reports were not valuable except in cases where the condition of the patient had been carefully noted for several years after the operation, and all the facts honestly related.

Dr. Robert Battey, in a report to the American Gynæcological Society, in September, 1887, of fifty-four cases of "Battey's Operation" which ended in recovery, had shown conclusively the worthless character of reports made just subsequent to the operation; in very few cases were there immediate positive changes, the majority of patients passed through various climacteric disturbances, and the abnormal symptoms did not disappear until from one to five years.

In the reports of the late Professor Schroeder, of Berlin, it appeared that some of the patients who had at first apparently been benefitted soon retrograded into a condition as bad as or worse than existed before the operation. Hegar had not met with that success that his early experience had indicated. But this surgical craze was not confined to cutting out the ovaries and tubes, but extended to abdominal or vaginal hysterectomy for uterine tumors or malignant

disease of the uterus. These operations were the most heroic and dangerous in surgery, and should never be performed until other less dangerous means of treatment had been exhausted, and one was satisfied that the removal of the uterus and its appendages would give the woman the best chances of recovery.

The speaker did not believe that hysterectomy for carcinoma or sarcoma of the uterus was often a justifiable operation, and certainly it was not if there was any investment of the peritonæum or pelvic tissues or a discernible infection of the system. His friend, Professor August Martin, of Berlin, was probably the best authority on the success of this operation; and, while some of the results were apparently encouraging, the majority were not so.

Dr. A. Reeves Jackson, of Chicago, had written a great deal to show that hysterectomy for cancer had destroyed many years of valuable life. Better results had followed hysterectomy for fibromata of the uterus; and, if the patient recovered from the immediate effects of the operation, she was usually much improved or entirely cured.

Dr. Keith, as an authority in this operation, had no superior, and probably no equal, and, while he had formerly operated often, he seldom did so now, and maintained that no one was justified in performing hysterectomy for fibromata until he had exhausted other valuable means of treatment, and especially carefully used electrolysis after the manner of Apostoli. The speaker did not wish it to be inferred that he was opposed to abdominal section in properly selected cases, for in ovarian tumors and in diseases of the pelvic organs attended by detectable alteration in stricture, which positively destroyed comfort, health, or life, and resisted all other means of treatment, laparotomy was imperative. He wished to inveigh earnestly against abdominal surgery as a fashionable craze; measured by the results in the hands of the learned and experienced gynæcologists, it was the grandest

success of modern surgery, but, when practiced by an ignorant, ambitious doctor, ever ready to risk the life of his patient that he might record another laparotomy, it was positively criminal. It was a great misfortune that many young men in the nursery of the medical profession, without special training, had a semi-insane desire to cut open the abdomen without a precise diagnosis, and before the merits of a more exact course of treatment had been tested. They wanted to begin where the great masters had left off, and assumed to be Keiths, Bantocks, Schroeders, Martins, or Taites. But this craze was only another instance of the peculiarity of the human mind; the pendulum had gone too far, but finally it would return to its proper place, and matters would correct themselves—the bad would be excluded and the good retained.

This was the history of the world; the theory of yesterday became the superstition of to-day, and the orthodoxy of to-day the heterodoxy of to-morrow. And sometimes the pendulum in its return went too far in the opposite direction, and some valuable discoveries were lost, to be discovered again by another generation. We learned from the papyrus of Ebers that the Egyptian surgeons performed iridectomies in the time of Ramises II, and then the custom fell into desuetude, to be revived several thousand years afterward.

Rectal Surgery.—A report on this subject was read by Dr. Joseph M. Mathews, of Louisville. (Which with the discussion appears elsewhere in PROGRESS.)

Progress in Ophthalmology was the subject of a report by Dr. J. M. Ray, of Louisville. A knowledge of eye diseases, he said, was slowly marching toward the attainment of perfection. Innovations were not so numerous as in the earlier infancy of the science; but we were more fully grounding ourselves in what had already been brought to our notice. Close study by careful clinical workers, conjoined with the researches of diligent pathologists and mi-

croscopists, was daily adding valuable observations to the science. Of the well established procedures, the operation for cataract demanded consideration. Von Graefe had taught that the linear incision, combined with iridectomy, was the most desirable operation. Previous to his teachings, the method of Daviel had been in vogue. This operation consisted in a large incision in the corneal margin, with extrusion of the lens, without removal of the iris. Its principal danger, however, was the large incision required, which led to suppuration of the cornea, and the iris often prolapsed into the wound. If this danger could be eliminated, the operation would again come into use. The operation of Daviel was being extensively used by Galezowski, De Wecker, and Panas, and their results presented strong evidence in favor of its adoption. In conclusion, he agreed with Landolt, who much preferred the operation of iridectomy; and believed it was better to seek for a fair amount of useful vision than for a symmetrical pupil. The after-treatment of cataract, he said, was now under consideration. It had formerly been the custom to keep both eyes bandaged and the patient in a darkened room for six or seven days. Recently many had advocated the admission of light and the use of bandages for only a few days. Chisolm had gone so far as to use only a piece of isinglass plaster, and placed no restriction over his patients. The speaker had recently performed cataract operations, bandaged only one eye, and sent the patient home, and no bad result had followed. He said that much of the brilliant work recently done in ophthalmic surgery was due to the employment of strict antiseptics. Weeks maintained that the most valuable of antiseptics were bichloride of mercury and nitrate of silver. He said that the question of contagious eye diseases was one that confronted every practitioner. It had recently been brought to the attention of the Legislature of the State of New

York, and measures had been taken to prevent the spread of such diseases in the various public institutions in that State. He had recently combated an outbreak in a charitable institution of his city. Out of forty-three inmates, twenty-three had diseases of the conjunctiva in different degrees of severity. He added that it was clearly the duty of those intrusted with the care of such institutions to keep strict watch and ward against the entrance of contagious eye disease, which, when established, was difficult of treatment and might result in serious impairment of vision. He spoke of recent attempts to cure opacities in the cornea by surgical methods which had long ago been declared physiological impossibilities. Von Hippel, however, had recently addressed himself to the question, and his efforts had aroused much hope. Dr. Fox of Philadelphia, had reported a successful case following the method of Von Hippel. Others had tried the same operation; but, as yet, sufficient time had not been given to demonstrate its permanent effect. He spoke of new drugs, calling attention to erythrophloeine hydrochloride, the local anæsthetic. He called attention to the value of the use of myotics in the relief of increased intra-ocular tension, and quoted Meyer as saying that regular instillations of pilocarpine had a decided influence on glaucomatous tension. He next called attention to the relationship between diseases of the eye and those of other organs of the body, especially menstrual diseases and changes in the cerebral centers. He asserted that, while the ophthalmoscope gave valuable aid in the diagnosis of many cerebral diseases, it should not be used as an encephaloscope. Attention was directed to the relationship between errors of refraction in the eye, especially astigmatism, and many functional nervous disturbances. The successful oculist must not rely too much on local medication, neglecting constitutional conditions, which often influenced ocular states.

Dr. Dudley S. Reynolds, of Louisville,

said that the report seemed to have covered all the ground in which real advances had been made. He wished to call attention to the fact, however—and he took it for granted that no one would dispute that it was a fact—that suppuration of the cornea was never due to the extent of any incision into its substance. He objected to that part of the report relating to the incision for cataract, because it suggested the idea that suppurations might arise without bacterial infection. He felt that it was necessary in the interest of the general practitioner—he had almost said the country practitioner, who compounded his own medicines or was dependent upon some person living in a town which was too small to come within the provisions of the pharmacy law—to say that the statement that one used one part of bichloride of mercury to five parts of water was very indefinite. How was it to be determined—by the weight of the bichloride crystals and by the weight of the water? As generally happened, he supposed a grain of the salt was made to represent a minimum of the fluid. Another method of measuring the fluid was upon the hypothesis that so many drops represented the equivalent of so many grains. Until there was a more uniform method of determining the actual amount, we could not know what was meant by one part of solid to so many parts of fluid. In his own practice he used one grain of the bichloride in twelve ounces of distilled water. In reference to trachoma, he was unable to determine whether or not Dr. Ray would lead us to believe that the chronic suppurative form of conjunctivitis brought on the trachoma or meant the trachoma was due to the epidemic conjunctivitis; but he would like to say that a great deal of confusion had grown out of the use of such terms as trachoma and granular lids, which was unfortunate. The word trachoma was not restricted in its meaning. As Sir Jeffrey Marston, of Her Majesty's Army, had ascertained, the light-colored, shining bodies

on the conjunctival surface in the retrotarsal folds, as well as the ocular conjunctiva itself, resembling rice grains or sago grains, were the local manifestation of constitutional infection. The malarial infection, as Sir Jeffrey Marston had stated, was often shown first by the presence of trachoma conjunctivitis. The hypertrophied papillæ of the palpebral and retrotarsal portions of the conjunctiva which followed purulent conjunctivitis were in no sense akin to trachoma. The speaker had had some striking experiences himself, extending over twenty years, in one of the largest orphan asylums in Kentucky. Part of that time his friend, Dr. Coomes, had had opportunities of examining cases in the same institution. In the month of April there were one morning two cases of purulent conjunctivitis; in the next forty-eight hours nineteen more cases occurred. Those children were separated from all the other children in the house; they were put into separate dormitories, and had access to separate playgrounds; they were kept restricted with regard to their liberties until there was a cessation of all morbid phenomena. Since that time not a single case had occurred. Bichloride of mercury and borate of sodium had constituted the principal medicaments. There was no relation existing between constitutional disease and contagious diseases of the eye. Even Von Hippel's operation of transplanting the cornea of the rabbit, in Dr. Fox's case, mentioned by Dr. Ray, was not the latest. By far the most brilliant result had been reported by Dr. Chisolm, of Baltimore. It was in a recent case, and it was very much more encouraging than that of Dr. Fox. As to erythrophloeine bringing on glaucoma, it was, as Dr. — found out, a pretty difficult statement to maintain. It was difficult to say that glaucoma might be made to attack persons who had not had it before. It had appeared in persons whose nervous system had been subjected to great tension, loss of sleep, mental anxiety, straining of the eyes,

or long-continued exposure to glaring light, and it might come on without any particularly marked symptoms. The use of pilocarpine by Meyer, of Paris, had been alluded to. The speaker regretted that it had; it misled the profession. Meyer was a conscientious man, but he had heard him exalt pilocarpine for no other reason than that his chief rival in the practice, Sichel, used eserine instead of performing iridectomy; but he did not agree with Galezowski, who excised the retrotarsal portion of the conjunctiva by seizing and pulling it forward and snipping it out with the scissors, a serious operation, notwithstanding it forever restricted the movements of the eyes. He took it for granted that glaucoma could not be relieved by eserine, pilocarpine, or anything else but Von Græfe's iridectomy; and for the very excellent reason that it allowed the cut vessels to be emptied into the aqueous chambers, where solution and ultimate absorption might take place. The operation of puncturing the sclera had proved unavailing. In all these cases the disease had returned. There were two eye affections—glaucoma and cataract—which nobody but the specialist should undertake to manage, because in glaucoma there were necessarily so many details in diagnosis that the general practitioner unarmed with the instruments of the ophthalmic surgeon and unaccustomed to the use of these instruments, could never undertake to reach by any possible means. In the extraction of cataract the success of the operation was dependent upon more important things than the particular form of the operation—an educated sense of touch, a thorough mastery of instrumentation, etc.

As to the muscular deficiencies of the eye, the speaker thought that Dr. Stevens, of New York, had done the greatest possible service in his work on the "Relation of Ocular diseases to the General System, and especially the Reflexes from the Genito-urinary Organs." The relations of the genito-urinary organs and the eye are well

known in many forms of diseases. To illustrate the subject more pointedly, he would state the case of a boy, twelve years of age, of good family and apparently well nourished, who would make spasmodic movements about the eyelids, and would snuff and move his head from side to side. He had a very slight error of refraction in the eye, H. amounting to $\frac{1}{60}$. He had, however, a constantly annoying double vision on any attempt at reading or going out into the strong sunlight. In cloudy weather he was comfortable; when the sun came out, he saw double. A critical inspection showed that his eyes squinted outward. The use of prisms developed no muscular deficiency. The speaker had been a little troubled to determine the nature of his diplopia. He looked at the way he stood, and watched his way of walking, and noticed that he turned his toes in. He found that he had phimosis. He sent him to his family physician in Louisville, who circumcised him. He now no longer saw double, and would not allow his small degree of hypermetropia to be corrected.

Dr. I. N. Bloom read a report on Dermatology, including the treatment of syphilis by injection of insoluble salts of mercury.

DISCUSSION.

Dr. J. C. McGuire, of Louisville, said: Before commenting on the paper proper, I would like to ask the question, if I understood the author to say that the diseases lepra and tuberculosis were identical?

Dr. Bloom: I did; and mentioned two or three authorities who thought the same.

Dr. McGuire: I propose to mention more than two or three who say that they are not identical. I want to say too, here, that about six months ago, before a meeting of the Louisville Medical Society, the same statement was made by a person now present, who may remember it. I denied it then, and took pains to look the question up thoroughly. I found of twenty-seven authorities on this subject, that seventeen

stated that these diseases were not identical. The reasons are these : One reason advanced by those who say the diseases are identical, is that the bacilli in the two diseases are identical; and against this is the fact that the bacillus of lepra and of tuberculosis cannot in the majority of cases be distinguished. One writer, who gathered six cases of persons who died with lupus vulgaris, found the bacilli in one case only, and in that case only one bacillus. Another reason is that tuberculosis is regarded as auto-inoculable. No one will pretend to say that lupus vulgaris is auto-inoculable. Now, as the majority, seventeen out of twenty-seven, say they are not identical. I am inclined to believe with the majority.

In anthrarobin I think we have a good substitute for chrysarobin, although I have never seen any injury result from this drug. I am opposed on theory to these hypodermic injections. I wish to say that if eight injections of the yellow oxide of mercury or calomel will cure syphilis, some of the substance must, after the last injection, be kept in the system as in a reservoir, and the syphilitic poison draws on this reservoir. I would like to know, in the course of six months, the amount of mild chloride or yellow oxide the patient needs per day. It would be infinitesimal. The treatment has been carried out more fully in the Parisian hospitals than anywhere else. It has been the conclusion of the physicians there that it cannot as yet come into practical use. Brock has reported very fully on this subject indeed. He says that Morrison is opposed to it, and Fournier is opposed to it. Fournier goes so far as to say that he does not believe in it, has never used it, and would not use it on theory. Balzer was the first to introduce the yellow oxide, and at first was very enthusiastic, but I believe he is now opposed to the treatment. Swilger has stated that inunctions of mercury will act just as quickly and do just as much good as injections. Against the hypodermic injections he has had a very remarkable experience, and a

very successful one, and I will say, and I think I can prove that Balzer will say, that nearly fifty per cent. have abscesses. If this treatment must be followed up it must be carried out until we have good reason to suppose the disease is cured, and we cannot have that belief until we have had a case under observation for some two years instead of a few weeks, as in many of the cases reported. I am opposed to injections of the insoluble preparations of mercury for the reasons that I have given, and because I believe that treatment by the inunction plan is much more satisfactory.

Dr. Reynolds: I am surprised that any one should say there can be any similarity between the bacillus lepra and the bacillus tuberculosis. They are not of the same shape, not of the same size, and not of the same organic structure. One of them is formed of little beads, the other is larger at one end than the other, and shows at one end a well-developed nucleus. It is more in the nature of a protoplasmic cell than any other form, except Friedlander's pneumococcus. The method of staining the bacillus tuberculosis may be applied to the bacillus lepræ, but when the stain has been completed the bacillus lepræ resembles a Bismarck brown, while the bacillus tuberculosis is always a violet-red color.

Dr. Archibald Dixon: My experience with insoluble hypodermic injections in the treatment of syphilis has been confined to one case, and I must say that that experience was not a very pleasant one, as results proved. About a year ago a gentleman applied to me with many manifestations of secondary syphilis. He wanted to get married, and desired to get rid of the syphilis as soon as possible. I proposed the injection, and he consented. With all the precaution I could use I made an injection of calomel into the gluteal region, and while it is true the manifestations of syphilis disappeared, he had the most intense pain, followed by a large abscess. Since then I have confined myself to Dr. Keyes' method.

Progress in Obstetrics was the subject of an address by Dr. J. W. Irwin, of Louisville. It was brief and confined chiefly to the more important subjects that had attracted attention during the year. The old and the new methods of performing the Cæsarean operation were compared, showing the more encouraging statistics following the latter. Remarks on puerperal eclampsia, on the uses of electricity in obstetrical practice, on the causes of lacerations of the perinæum, and on post-partum antiseptics were presented. The essayist said that anal ulcers, fissures, and fistulæ and hæmorrhoids were strong predisposing causes of laceration of the perinæum. Such troubles, he said, brought about tonic contraction of all the muscles of the outlet of the pelvis, causing, during labor, greater resistance to the descent of the foetal head, and rupture of the perinæum was the inevitable result. He then reviewed the recent methods of post-partum antiseptics, and spoke of the rules laid down by Playfair for the governance of monthly nurses in the management of cases of confinement, in which that author advised that "the vagina of the puerpera should be washed out daily with an antiseptic solution," and concluded his remarks by saying that, when the entire field of antiseptics in obstetrical practice was viewed in the light of reason, one could not help believing that the numerous methods which had been suggested from time to time for the destruction of germs in the lying-in woman should be supplanted by cleanliness by means of pure water.

Genito-urinary Diseases was the subject of a paper by Dr. E. R. Palmer, of Louisville, in the course of which he referred to the use of iodoform; to that of mercury, hypodermically and by inunction; and to heredity.

The Surgical Treatment of the Urinary Bladder and Urethra was the title of a paper read by Dr. Archibald Dixon, of Henderson, as a part of the discussion of Dr. Palmer's paper.

Dr. W. E. Rodman, of Hodgenville, said that it was simply with reference to his experience in gonorrhœa as a cause of sterility that he wished to speak. He remembered that several years before he had treated a case of gonorrhœa in a lady—contracted from her husband—and afterward had delivered the woman of three children; and he remembered another case where he treated the husband for gonorrhœa, and also the wife, pregnant at the time, and afterward she conceived and had another child.

Dr. Palmer said that Dr. Dixon had spoken of urethral injection, and credited it to George Brewer. John O'Reilly had published in the *Practitioner*, in 1874, a long paper in which he asked attention to that treatment, which antedated Dr. Brewer by at least ten years. They called that "Brewer's method," just as they now called it "carbolized treatment," just as they called it "Levick's treatment." In regard to the abortive treatment of syphilis, the speaker thought it was generally recognized that syphilis was not the dire disease that it had been formerly. He remembered that when he was a young man he had remarked that he had a great deal rather have syphilis than stricture. It could be cured in a comparatively limited time, and abortive syphilis was an every-day occurrence in common practice. Dr. Johnstone had said that the gynæcologists here had seen uterine obliquities. He had seen sterility in women which he had no doubt was dependent upon the fact that the right broad ligament was so contracted as to throw the os on the left side of the vagina. These obliquities were not the ordinary flexions and versions, but the pulling of the womb on top, to one side, and throwing the cervix out of the axis, accounting for the sterilities attributable to gonorrhœa. With regard to Cox's operation, the more he saw of it the less he liked to do it. He had rather do a cystotomy than go prowling around without a guide. A man was almost fool-hardy to at-

tempt to open into the bladder without a guide.

Improvements in Nasal Surgery.—Dr. M. F. Coomes, of Louisville, reported on this subject substantially as follows: The most important improvements in nasal surgery had occurred within the last ten years. Until recently operative procedures for correcting abnormalities resulting from deviations of the septum had consisted in the removal of a portion of the most prominent part of the offending structure. This was usually accomplished by the use of a chisel or a sharp knife. Where there was a circumscribed prominence decidedly conical in shape, the chisel was probably the most convenient instrument for its removal. There was little skill necessary in the use of the chisel—viz., to know how to regulate the amount of force used. It was always best to dissect up the overlying structures before attempting to remove bone or cartilage. By doing this, the annoyance from hæmorrhage is avoided, and the operation could be done much more successfully and satisfactorily. Where there was stenosis, the result of a bony or cartilaginous growth, the Morrison, or dental, engine, as it was called, was one of the most valuable means for relief. With suitable drills it had the advantage of being applied just where it was needed without interfering with other structures, and its application was painless. It enabled the operator to do just what he desired to do without doing any more. Trephines, which were now a part of surgical paraphernalia, were most conveniently used with the engine for the removal of certain osseous or cartilaginous growths found in the nose. While it had been more than ten years since the introduction of the galvano-cautery for the purpose of removing growths from the nose, its perfection had not been attained until recently. While the galvano-cautery was an instrument of incalculable value to the rhinologist, the speaker knew of no instrument which was calculated to do such an amount of injury by its im-

proper use. The fact of its being untended by hæmorrhage made the patient much more willing to submit to its application, thus enabling designing persons (and they existed in the medical profession) to take advantage of unsuspecting people who fell into their hands. He believed that he could say without appearing egotistical that he observed as many persons afflicted with diseased noses as any man in the Southwest, and he was free to say that he rarely found it necessary to use the galvano-cautery. As to its curing hay-fever, it was a myth, and the man who had done most to urge the public to believe the destruction of so-called sensitive area in the nose by the use of the galvano-cautery would cure hay-fever now admitted that he had been too sanguine, and that it was a failure. Failure to cure would not be half so bad if it left the nose in as good condition as before its application; but it so often happened that destruction of large areas of mucous membrane in the nose resulted in cicatrices which were without any of the functions of a mucous membrane, and the result was that the secretions became dry and accumulated in the nose and created such an unpleasant odor as to call for the patient's constant care in order that he might not become a nuisance to his associates.

The introduction of the use of artificial light as an aid in this branch of surgery had rendered it much less difficult, and enabled us to accomplish many things which, under ordinary circumstances would be unattainable. It was but a few years since our outfit for nasal surgery consisted of a Gross's polypus forceps and a snare. Now we have a variety of snares, the most valuable among them being Jarvis's and Wright's. The latter had a ratchet-like movement for tightening the wire. This was moved by a trigger similar to that of an ordinary pistol, which enabled the operator to control his patient and do his work more satisfactorily. The author claimed the credit of having devised a number of instruments for the re-

moval of tumors from the nasal cavities, the most important of which were a pair of scissors and a forceps. The allegation made for both instruments was the greatest amount of strength in the smallest amount of space. Either of these instruments could be used through a large ear speculum. This hook and cutting fork had been devised by him some five years before. He considered the hook one of the most valuable instruments that he had, both for the removal of tumors and as a diagnostic instrument. Here was a cutting snare which he had recently had constructed. Its mechanism spoke for itself, and with its compactness showed at once that it was a valuable adjunct to the nasal armamentarium

Insanity and Life Insurance was the title of a paper by Dr. B. W. Stone, of Hopkinsville, who cited the case of a man who had become melancholy, abandoned his business, and sought a life policy, which he finally obtained, and then on the next day committed suicide.

Dr. F. H. Clarke, of Lexington, said that there was hardly a medical school which sent out graduates that did not teach them in regard to cases such as they would not see in years of practice. No man practiced any length of time without being called upon to see an insane person, either in court or privately. There was no case that he knew of in the practice of medicine more difficult of diagnosis than one of diseased mind; it baffled the most careful observer. He did not believe that there was any well-marked line—theoretically—between a healthy body and a diseased body. Fortunately, however, there was a standard of health, and it was known when a person was sound or unsound. In the cases of persons sent to an asylum, the classification of the diseases was often embarrassing. He did not know of a more important field than that of insanity. The reason was that in his State as soon as a man got insane, he was sent to the hospital. He could be as well treated elsewhere as in the hospital.

He would be injured by being sent to an asylum for the insane. He believed that a man who was insane or becoming insane should be made provision for. He hoped that medical jurisprudence would become the subject of a special chair in all the medical colleges.

Dr. L. S. McMurtry, of Danville, was elected president for the ensuing year. The next meeting will be held in Richmond, beginning on the second Wednesday in May, 1889.

CHRISTIAN SCIENCE.	Christian science is not as some suppose, a new affection, but a
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mongrel, a psychoneurosis produced by a cross between the superstitious of the dark ages and some of the neuroses of advanced civilization. The pedigree of this promising hybrid is not yet fully made out, but is generally thought to be the result of union between Witchcraft and Spiritualism, as it more nearly resembles these than any of the kindred affections. Though it at times simulate Hysteria, Melancholia, and various other forms of mental aberration.

Generally speaking it adopts the material part of spiritualism and the superstitions of witchcraft. The basis of the creed which is considered new is found in resolution No. 17, as adopted by the National Association of Spiritualists in 1868. They deny the communion with departed spirits, but claim to hold communion with fellow scientists regardless of space. They discard the herbs and poisons of witchcraft, but hold fast to the incantations and supernatural powers. The priesthood is delegated to "Healers" who have inherited the craft and cunning of the Hag, and the audacity and itching palm of the Medium. They hold their meeting in the afternoon; all members are expected to be present at each seance either in the flesh or by "thought communion."

Like witchcraft christian science is largely confined to women, about 85 per cent. being females. The movement will doubtless result in much good—to the managers of private asylums and sanitariums.

PROGRESS

A MEDICAL MAGAZINE. ISSUED MONTHLY.

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THOMAS C. EVANS, M. D., ASSISTANT EDITOR.

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VOL. III. LOUISVILLE, AUGUST, 1888. No. 2

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

The Mississippi Valley Medical Association will meet in St. Louis, September 11, 12 and 13, 1888. The

coming meeting promises to be the largest and most interesting for years past.

The officers and committee have spared no pains to secure a full attendance. The number and character of papers already promised makes the scientific part of the programme an assured success.

Reduced rates can be had on all roads. As to the social feature of meeting it need only to be said St. Louis will sustain her reputation, and that Dr. I. N. Love is Chairman of the Committee of Arrangements.

A cordial invitation is extended to the Profession west of the Alleghanies to come and bring their families.

The Committee of Arrangements has issued the following announcement:

TO THE MEDICAL PROFESSION OF THE MISSISSIPPI VALLEY.

That there should be a thorough appreciation on the part of the profession—of the mutual interests of medical men in the

States of the West and South cannot be questioned. Engaged as they are in the management of diseases peculiar to their section, realizing the value of an exchange of

ideas between workmen in the same calling and the same field, the doctors of this great valley should at once step to the front and join earnestly in an effort to organize and crystallize the scattered segments of the profession into a strong and harmonious whole.

Knowing as we do that the seat of empire of our country socially, commercially and politically has removed from the Eastern shore, is not the time ripe for accomplishing the same change in the medical profession? Shall not "Westward the star of empire" of our profession take its way?

Recognizing the truths of the foregoing propositions and in earnest thereof, we, the undersigned, cordially invite all members of the profession in the states west of the Alleghanies to meet in St. Louis, Tuesday, September 11, 12 and 13, and become members of the Mississippi Valley Medical Association.

A good programme is being arranged with a full supply of able papers and interesting discussions.

This is the most desirable time to visit St. Louis, it being during the great exposition and carnival season. All the doctors should bring their wives and families, as there will be ample enjoyments for the latter while the meetings of the society are in progress.

Liberal arrangements will be secured from the various railroad and telegraph companies.

We trust that every member of the profession, eligible, will consider himself and family most cordially invited to St. Louis at the time above mentioned. Please address the Chairman of Committee of Arrangements for further information. Procure from your local ticket agents a receipt for full fare paid.

Committee of Arrangements: H. Tuholske, Y. H. Bond, Frank R. Fry, R. M. King, A. H. Meisenbach, H. H. Mudd, Josephus R. Lemen, H. C. Dalton, Spencer Graves, A. H. Ohmann-Dumesnil, Robert L. Thomson.

I. N. LOVE, Chairman.

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The Publisher's Department of PROGRESS is designed to afford the Business Editor proper space, in the regular order of our system of classification of the text, for such notices and comments as he may feel inclined to make of meritorious articles, and such items of news as may seem to him best calculated to interest the readers.
No house will, therefore, be able to purchase space in this department.

THE ADMINIS-
TRATION
OF CHLORAL.

In an editorial in the *Alienist and Neurologist* S. C. H. Hughes says : " Battle's Bromi-

dia is a clean and palatable compound of approved hypnotic principles. The proportion of bromide of potassium in its composition, to the chloral, could well be doubled for most of the purposes for which such a hypnotic combination is indicated. The directions accompanying this excellent hypnotic combination suggest a criticism. The injunction to not exceed three or four of the doses indicated in twenty-four hours, and to administer preferably during the evening, or night-time, would avoid many of the evil results which follow the injudicious use of this and all similar narcotics.

Those of our readers who desire to use this compound in practice (and when its ingredients are indicated, no better mixture can be found) will find it gives much better satisfaction in states of mania and high cerebral excitement, in double the ordinary dose at about nine o'clock P.M., or, at an hour or two before the patient's ordinary time of going to sleep, when well, adding 30 grains more of bromide of potassium, and plenty of peppermint or other aromatic water, to protect the lips from being blistered by the chloral, as is liable to happen if chloral is not given well diluted. We write this prescription thus :

R
Bromidiæ 3 ii.
Kali bromidi 3 ss.
Syr. Tolu 5 iij.
Aq. Menth. Pip. qs. ft. . . . 3 i.

Ft. haustus in aqua q. s. S. Give at eight or nine P.M., in plenty of water. Repeat once during night if necessary.

Fifteen grains of chloral, given every hour in cases of high maniacal excitement, may prove abortive, and the patient's blood may, at the end of five or six days, or even hours, of such treatment, become vitiated and depraved, the vital centers of the medulla weakened, and when, as sometimes happens, the attending physician, or another one, called in, becomes desparate, and gives a very large dose of chloral, no reaction follows the profound hypnotic impression, the cerebro-medullary centers being completely overwhelmed and incapable of that physiological rest and rebound which should be the aim and result of all therapeutically induced slumber.

Fifteen grains of chloral in mania, as a general injunction, is bad. A full dose at the right time, when nature is likely to incline most readily to rest, and not more than once repeated, and without previous small, abortive, and of course damaging doses, is better. No experienced Alienist would stereotype such a direction for mania and states of high cerebral excitement.

We make these remarks because bromidia is a combination the profession does not wish to dispense with, and a good remedy may be put before the profession with bad directions.

The administration to epileptics of anything with chloral in it during the time when the patient is going about, is also unscientific advice. The same criticism holds good in regard to nervousness and irritability in persons going about. It is dangerous to give chloral to persons who are not in bed, or going immediately to bed, to remain till the effects of the chloral pass off. If this danger is kept in mind, and chloral is only given to recumbent patients late in the day, in the evening or night-time, in a single or at most a duplicated dose, nicely adjusted to the demands of the case, no untoward result need ever follow its use.

We should never give chloral for headache or neuralgiæ in the day-time, unless the patient should be sadly in need of and ready to go to sleep.

Chloral imbecility may readily be induced by giving repeated small, ineffectual doses, and it requires large doses to prove effectual in great cerebral or sensori-motor nerve excitement, when the patient is sitting up or going about.

PROGRESS

A Monthly Magazine for Students and Practitioners of Medicine.

"I HOLD EVERY MAN A DEBTOR TO HIS PROFESSION; FROM THE WHICH AS MEN OF COURSE DO SEEK TO RECEIVE COUN-
TENANCE AND PROFIT, SO OUGHT THEY OF DUTY TO ENDEAVOUR THEMSELVES, BY WAY OF AMENDS, TO BE A HELP AND
ORNAMENT THEREUNTO. THIS IS PERFORMED, IN SOME DEGREE, BY THE HONEST AND LIBERAL PRACTICE OF A PROFES-
SION; WHEN MEN SHALL CARRY A RESPECT NOT TO DESCEND INTO ANY COURSE THAT IS CORRUPT AND UNWORTHY THEREOF,
AND PRESERVE THEMSELVES FREE FROM THE ABUSES WHEREWITH THE SAME PROFESSION IS NOTED TO BE INFECTED; BUT
MUCH MORE IS THIS PERFORMED, IF A MAN BE ABLE TO VISIT AND STRENGTHEN THE ROOTS AND FOUNDATION OF THE
SCIENCE ITSELF; THEREBY NOT ONLY GRACING IT IN REPUTATION AND DIGNITY, BUT ALSO AMPLIFYING IT IN PROFESSION
AND SUBSTANCE."—BACON.

VOL. III.

LOUISVILLE, KY., SEPTEMBER, 1888.

No. 3

GENERAL MEDICINE.

QUININE

HÆMOGLOBINURIA.

BY

R. S. WILLIAMS,

M. D.,

MOUNT MEIGS, ALA.

The subject of hæmorrhagic malarial fever was before the Medical Association of the State of Alabama that convened in the city of Montgomery

in 1872. Every member participating in the discussion had dwelt emphatically on the active administration of quinine, as the remedy for this malignant form of so-called "hæmorrhagic malarial fever." Near the close of the discussion, I addressed the assembly and said: "After twenty-three years of careful observation and study of that fatal disease treated by myself, I came to the conclusion that the apparent cause of the so-called hæmorrhagic malarial fever was the toxic effects of quinine in an unknown condition of malarial hæmoglobinæmia. In malarial fever, without this peculiar blood condition, I regarded quinine as the most potent remedy offered by our *Materia Medica*." My conviction in regard to the toxic effects of quinine, was ignored by every member of that society.

The ten minutes of time allotted by the recent assembly was too limited for me to offer additional evidence in proof of the truth of my "*startling assertion*" made to the assembly in 1872, and confirmed by an experience of eighteen years since. I was not surprised that a large majority of the present assembly, being deprived of that evidence, should oppose my views.

I will briefly state my experience in this now properly called malarial hæmoglobinæmia. In the spring of 1849 I was pressed into service as nurse by Drs. Boling and Wm. O. Baldwin in a case they had on a plantation between the cities of Montgomery and Wetumpka, on the Talapoosa river. Dr. Baldwin persuasively remarked before I saw the patient, that I might learn something from the case that would be useful to me in the future. The doctors agreed that if the case was in New Orleans or Mobile, it would be called yellow fever. He had been sick four days with intermittent fever; had taken forty-five grains of quinine each day before the hæmoglobinuria set in. Dr. Baldwin had Dr. Boling called in consultation on the fourth day. I was directed by them to give twenty grains of quinine, four grains of calomel, and one-fourth grain morphine every six hours until three doses were administered. The transfusion of hæmoglobinuria was large early in the day, but rapidly diminished in the latter part of the night, and contained filaments of coagulated fibrine. I left before the arrival of the doctors, but was sure the patient was merging into uræmic coma. He died two days after of uræmia.

In the summer of 1849 I located near Line Creek. The country was cultivated by large and wealthy farmers. My practice extended until it took in that portion of the country comprising many of the plantations on Line Creek, also on the Talapoosa river, covering a large malarial section. I frequently met with cases similar to the above

mentioned, then called yellow disease or yellow chills, which, on account of its mortality, caused terror among the people and physicians. Most of the cases occurred in the summer and autumn, yet I frequently had cases in the winter and spring. This was at a time when the impetus, given by Dr. Fearn and others for the administration of large doses of quinine in malarial fever, was followed by doctors, overseers and heads of families. In common with other physicians, on the appearance of hæmoglobinuria, I increased the already large doses of quinine, believing it was the remedy for the disease. Some of my cases recovered, but a large percentage of them died. After killing most of my cases in full accord with orthodox practice, a conviction was started on my mind by a conversation with Dr. Wm. O. Baldwin on the toxic effects of quinine in large doses, that, possibly, it had something to do in precipitating malarial hæmoglobinæmia into hæmoglobinuria, as I had noted all of my cases had taken quinine before hæmoglobinuria set in.

About this time I was called to see a child suffering with this, then to me, terrific disease. I requested the parents to send for Dr. Baldwin to take charge of the case, as I had lost five out of my last seven cases; that all of them had taken quinine before hæmoglobinuria supervened. My conviction was that quinine had produced it. Should the child die, treated under my conviction, public opinion and all the physicians would think that it was mal-treated. The father was a clear-headed and observing man. He replied: "I have confidence in what you say in regard to malarial diseases, my child has taken quinine three days, and was under the influence of quinine when this bloody discharge came on." I gave creosote and morphine to check the nausea, followed by a solution of Epsom salts with the addition of spirits of turpentine, hoping that its hydragogue action would lessen the effusion from the kidneys by relieving them of a part of their labor. After the action of the medi-

cine the urine cleared, but the fever returned at the same period each day, without any colouring of the urine. The third day I administered two grains of quinine at intervals of three hours, hoping to break up the intermittent fever. The hæmoglobinuria returned. I felt the remorse that one would feel in believing right and then doing wrong. With iron and arsenic as a blood tonic the urine gradually cleared, and in a few days the child was convalescent. I have never given a dose of quinine in a case with hæmoglobinuria since, and, although it may sound egotistical, I have never lost a case since I quit giving the quinine, and defy all the doctors and acquaintances to prove this "*startling assertion*" false. I do not attribute my success to any special treatment of my own, *but to the withholding of quinine.*

Occupying a position so antagonistic to my professional brethren in this disease, we could not consult. I have had cases turned over to me by neighboring physicians, some of them doing this with a view of increasing my mortuary report in cases they thought hopeless.

I was called hurriedly to see Mr. Mc——. I found him with a pulse 160 to the minute, skin a dark yellow hue, interspersed with purpuric petechia on his arms, abdomen, and legs, suffering with intense nausea, facial expression cadaveric, a constant picking at his lips, and exudations of a bloody fluid from his mouth, the urine reduced to one-half ounce in six hours. His wife informed me that he had suffered with bleeding at the nose frequently for two weeks before his attack; also that he had not slept any for four days and nights. He was restless and very nervous. He was taking by enema forty grains of quinine every six hours and five grains of calomel by the mouth at the same interval. I prescribed thirty grains chloral, six drops creosote, and one-sixth grain morphine to be taken immediately. The nausea, nervousness and hiccough were relieved in less than a half hour. He expressed himself as feeling much better, and

in a few moments was asleep. I laid down, giving his wife instructions to arouse me when he awoke. I was not disturbed during the night. The next morning I found him still sleeping, pulse ninety and facial expression much better. While examining the condition of his bladder, he awoke and discharged twelve ounces of slightly colored urine. Expressed himself as feeling well with the exception of weakness. I prescribed bin-iodide of mercury, iodide of potassium and iodide of iron as a blood tonic. In ten days he was attending to his business and is yet living. Dr. H——, the attending physician, expressed his astonishment at his recovery, and laughingly said that he intended to put me in for one death from yellow disease.

My neighbor and friend, Dr. J. C. Nicholson, three years ago wrote me a note that he had a case of "malarial hæmaturia," but did not have the nerve to treat it without quinine and wanted me to see the case with him. I found a panic in the family and a suffering woman. The hæmoglobinuria was profuse, and this had commenced but a few hours before my visit. She had been taking quinine for three or four days. I directed my question to her and asked, if she felt the effects of quinine before the hæmoglobinuria set in. She said that she felt it perceptibly each of the three days, yet it had failed to cure her chills. I told her that quinine had brought it on, and, if she would promise me not to take any more, I would insure her a speedy recovery. The case was left in charge of Dr. Nicholson, and in a few days she was well.

In 1886 Dr. Wagner, of Mount Meigs, wrote me a note, requesting a visit to his daughter, saying that she had hæmorrhagic malarial fever, that her mother had died with this disease, and that he had been unfortunate in the treatment of such cases. He requested me to direct the treatment of her case. She had taken quinine for several days, and was under the influence of it at the time the hæmoglobinuria set in. I pre-

scribed salts and turpentine, followed by the arsenic and iron treatment. She recovered.

While absent from home in '85, my son having intermittent fever, prescribed for himself quinine. The second day, while under the influence of quinine, hæmoglobinuria was brought on. This was his sixth attack. I found Dr. Taylor with him. He had made up his prescription, which contained with other ingredients large doses of quinine. Said he had found much more decided effect from large doses of quinine than from small ones. My reply was that, if all the doctors of the State were present and advised me to give him quinine, he should not take it. I insisted that he should remain with me through the night and see the effect of no quinine treatment. He slept in the room with my son. I gave Epsom salts and turpentine, afterwards creosote. His urine was clear in the morning, and in the evening he visited Mount Meigs, a distance of two and a half miles.

In 1870, Mr. R——, of Montgomery, Alabama, had frequent attacks of intermittent fever. In May Dr. Baldwin attended him in one of these attacks, gave him a mercurial cathartic, and with his usual caution quinine to the amount of eighteen grains in twenty-four hours for three days without suspending the paroxysms of fever. The fourth day quinine precipitated hæmoglobinuria, which came on suddenly, while under its influence, and was attended with profuse effusion, great loss of physical power, and intense nausea. I was requested by Dr. Baldwin to visit with him Mr. Ray about four hours after the beginning of the hæmoglobinuria. We administered morphine and atropia hypodermically. This relieved his nausea and nervous prostration. After this we gave him a dose of Epsom salts and turpentine. He was allowed to have iced milk punch to quench his intense thirst. The hæmoglobinuria disappeared in twenty-four hours. In a few days he was well.

Dr. Jackson, of Montgomery, called me in consultation with him in the case of Mr. R——, who was suffering from quinine hæmoglobinuria. At my request the quinine treatment was suspended, and, while under the influence of morphine and atropia, a concentrated solution of salts and turpentine was administered. The hæmoglobinuria disappeared in twenty-four hours. I informed Dr. Jackson that I had seen numerous cases in which the fever continued to return at regular intervals for several days where quinine had been administered, and brought back the hæmoglobinuria. The doctor becoming impatient at the daily return of the fever, and believing that quinine would suspend paroxysms, administered eighteen grains, which had the effect of reproducing the hæmoglobinuria. It disappeared on withholding the quinine, though his convalescence was retarded by the appearance of numerous interstitial purpuric abscesses.

I could fill a volume with similar cases of those living in and around Montgomery, but they would be only a repetition of my experience in the cases already given.

There are many cases of hæmoglobinuria that are attended with symptoms of some of the numerous forms of purpura hæmorrhagica. Dr. Frank Woodbury, editor of the *Philadelphia Medical Times*, after giving the history of two cases of purpura hæmorrhagica, says: "This remark I would like to make upon the etiology of this disease as illustrated by these cases. In each there was evidence of malaria, and there was one constant antecedent, the bleeding followed the administration of quinine." It is a remarkable coincidence that in the severe case reported by Waugh, the attack also followed the administration of six grains of quinine. Lervin, in his book on the "Incidental Effects of Drugs," mentions purpura as one of the occasional effects of quinine. Vepau has observed a petechial form of purpura after the administration of three grains of quinine."

We know that quinine is a protoplasm poison, and its toxic effects are sometimes manifested by permanent injuries, such as amaurosis, several cases of which I have seen, among them Prof. Brumby, formerly a member of the faculty of the Tuscaloosa College. It sometimes produces permanent deafness. Both conditions are brought on suddenly, thus depriving the brain of two of the most important avenues to intellectual culture.

In charging quinine as a factor in the causation of certain cases of hæmoglobinuria, this has not lessened my confidence in its medicinal value in appropriate conditions. I cannot ignore the fact that there is an abnormal condition of the blood, of the precise nature of which we are still in the dark, yet with future prospects of microscopic investigations by such able men as Councilman, and Laveran, the darkness will soon be turned into light.

CHICAGO WILL GO. 70 Monroe street,
Chicago, September

3, 1888. An important meeting of the Mississippi Valley Medical Association will be held at St. Louis, Mo., on the 25th, 26th and 27th days of September, 1888. The Secretary begs leave to advise that satisfactory arrangements have been made with the Wabash Railway for reduced rates of fare from all points on its line, and that route is recommended to those attending the meeting. The Wabash runs vestibule trains between Chicago and St. Louis, comprising smoking cars, reclining chair cars, (seats free), Wagner palace sleeping and buffet compartment cars, with all modern conveniences. This being the official route it is requested that all will make arrangements to purchase tickets over that line.

Trains leave Chicago, Dearborn Station, at 8:25 A. M. and 9:00 P. M., arriving St. Louis 6:15 P. M. and 7:25 A. M., respectively.

Members starting from Chicago should obtain tickets and sleeping car accommodations at the Wabash City Ticket Office, 109 Clark Street.

DR. J. L. GRAY,
Secretary M. V. M. A.

GENERAL SURGERY.

CYST OF
THE SPLEEN.

BY

ANDREW J. DOWNES.

M. D.

Read to the Philadelphia
County Medical Society.
Stated Meeting, June
11, 1888.

On the morning of August 27, 1887, I saw Mrs. B., aged twenty-nine years. She complained of a lump in her left side, which was very painful, but mostly so during the evening and night. Her pulse was

112, temperature 100.5° ; she appeared cachectic, and her face was deeply pigmented. On examination I found a tumor situated in and below the left hypochondriac region. By percussion and palpation I marked out a large spleen extending in the axillary line to a point on a level with the ilium, and transversely from near the spine to beyond the median line of the abdomen. It was very tender on pressure. The salient points of the history I then elicited are briefly as follows: In April, 1886, she first complained of pain in the left side. It came on every evening, and lasted two weeks. It returned again in July for a week. She was again free from pain in her side until November, but says that during this interval she was sleepy all the time and had afternoon fever, but no chills. From November, 1886, to the date of my visit, pain had been constant and had increased in severity notwithstanding treatment.

March 20, 1888, she was confined. The third day after she had a severe chill and high fever. On the fifth day another marked chill occurred, and at the same time—8 P. M. In October, 1885, two weeks after confinement, she had a chill, but was sick only for a day. These were the only chills she ever had. She first noticed that her side was enlarged in April, 1887, soon after her confinement. Soon after this, in May, a large quantity of fluid was withdrawn from her left chest by Dr. Jewett, of Brooklyn, where she had resided until a short time before I saw her.

The history was not such as to lead to an accurate diagnosis. I detected no evidence of fluctuation at this time. I gave a large dose of quinine, relieving her pain and tenderness so greatly the first night as to incline me to a diagnosis of malarial hypertrophy. Under this impression I treated her with considerable success for three weeks. September 27th, not having visited her for a week, I was sent for. She was suffering from nausea and vomiting, with a pulse of 130, and a temperature of 105° . While out, September 24th, she had taken a severe chill and became very sick. All this time she had been on large doses of quinine and arsenic. I gave up the malarial idea.

Examining the tumor I found fluctuation. The temperature from September 27th to October 2d reached a daily maximum average of 105° . The last two days I ceased using antipyretics, so little influence had they.

October 3d, with Prof. Roberts Bartholow in consultation, I coincided in a diagnosis of cyst (hydatid?) of the spleen. October 4th, assisted by Dr. Martin Rively, I aspirated the tumor and drew off three ounces of a blood-stained, very offensive fluid, full of flakes and shreds of membrane. October 6th, I aspirated again and obtained the same amount of fluid. This time, with the fluid came a small piece of tissue, which, on examination, proved to be spleen tissue. October 9th, I aspirated again, but obtained no fluid. The little fluid I withdrew on the first two occasions lowered the temperature two degrees. I was sure of fluid, and its septic character was only too evident. I knew a cavity was present and probed it with the canula. The woman was moribund. I determined to open the spleen and give her a chance for life.

October 14th, assisted by Drs. Joseph Hearne and Martin Rively, I performed splenotomy as follows: Selecting the most prominent and fluctuating part of the tumor, I made an abdominal incision, one and a half inches in length, beginning an inch be-

low the costal end of the tenth rib (on a line with the nipple), and directing it obliquely toward the umbilicus. It included everything to the peritoneum. Spreading the lips of the wound apart, an oval surface of peritoneum was exposed, through which a trocar was introduced and fluid found. Corking the canula, I introduced twelve silver wires from the margin of this oval surface in through the peritoneum capsule, etc., and out through the skin. And having twisted the wires, thus closed the peritoneal cavity from the splenic. I now removed canula, entering in its place a groove director, along which I made an incision into the spleen. A large quantity of fluid escaped, the first to appear being like that removed October 4th, but it soon consisted almost of blood. It was evidently septic. I was surprised to find no cyst. The walls of the cavity I opened into were pulpy and clotty. Disintegrating and bleeding spleen substance. With my index finger I could reach close to the crest of the ilium—beyond the median line and up beneath the lower rib, finding it necessary, however, to break through spleen tissue. Hemorrhage soon began to lessen. I irrigated as well as I could, introduced drainage tubes, and dressed with absorbent lint and bandages.

Though the shock and loss of blood were considerable, the benefit of the operation was soon apparent. At 4 P. M., just prior to interference, the patient had a pulse of 128, and a temperature of 104°. At 6:30 P. M., the pulse was 112, the temperature 100.5°.

October 14th, or four days after operation, I removed the sutures. A marked diminution of the size of the tumor had occurred. The spleen substance could be felt as ragged pieces lining the cavity. Some of the most detachable pieces I removed. The discharge had been very free, sufficient to saturate heavy dressings three times daily, its septic character, and the fact that the opening, the patient supine,

was the highest point of the cavity, indicated the necessity of a deep counter opening.

October 28th, I made an opening half an inch wide at the free end of the last rib. With this second opening, from its deepest part, I had control of the cavity and with a tube in each opening was able to wash it out thoroughly, and drain it freely.

November 5th, after removing a piece of spleen from deep down behind the ribs there occurred quite a flow of pus. It was a grayish fluid and the microscope showed the corpuscles granular and disintegrated. Though I searched diligently I can not say I found a hooklet. This was the first pus I had met with. The retraction of the capsule, at this date, had advanced to such a degree that the lower margin of the tumor was just below the border of the ribs.

November 13th, a piece of tissue protruded from the upper opening. It was attached below. On removal it proved to be a piece of membrane about two square inches in area. Was not this part of a cyst wall? The splenic tissue could be felt more distinctly after its removal. It came from the centre of the mass, not the confines, hence it was not a piece of the thickened capsule. With its removal the discharge of pus, which began November 5th, ceased.

November 16th, I removed with finger and forceps quite a mass of spleen, in bulk nearly as much as a normal organ. The following day the patient was extremely pale.

November 26th, all the spleen I could detect was a small piece in the left inner and upper wall of the cavity close to the diaphragm.

November 30th, the pulse was 104 and the temperature normal for the first time.

December 2d, the discharge became a dirty, chocolate-colored granular matter. Splenic débris I called it.

December 22d, sloughing débris ceased to appear. I considered the spleen substance entirely removed.

December 23d, at 4 P. M., after irrigating I inserted a curved uterine forceps five inches deep, toward the outer axillary border of the cavity, and spread the blades apart. A profuse hemorrhage, even to syncope, occurred. Plugging with lint finally arrested the bleeding. The blood was arterial. What bled? One of those small branches, I believe, into which the splenic artery ramifies at the hilum of the spleen. One of these feeding the capsule was, no doubt, torn by the blades. It bled too freely, I thought, to be due to tearing of adhesions. At 9 P. M. I was sent for. The patient was very low. The pulse was scarcely preceptible at the wrist. Her hands and feet were cold, her tongue pale, the tip actually white. Her eyelids were very œdematous. The abdominal wall was retracted and wrinkled, as in cholera. She was a picture of hydræmia. Not for three days did the puffiness of the eyelids disappear, or could the patient sit up without vertigo.

January 12th, the primary opening was allowed to close, and I expected soon to see the counter-opening close.

January 21st, I had not seen the patient for three days. The discharge had been slight. The silver tube, two inches long, which I had lately used to drain the cavity, was nearly out. I removed, cleaned, and then introduced it its whole length, when there gushed five ounces of a purulent, non-offensive fluid, containing flakes and pieces of tissue like broken-down fibrous tissue. Was not this breaking down capsule and annexed inflammatory adhesions? The capsule, bereft of its spleen, was without function, and nature was throwing it off as useless. The cause of this collection of fluid was as follows: thinking everything about out of the cavity that was to come, I had gradually withdrawn the tube until the end entered not into the cavity, or perhaps became choked by a piece of tissue. Sloughing still continued, and the product was unable to find exit.

From this date I kept in a six inch rubber

tube, irrigating frequently, and using afterward an emulsion of iodoform, which effectually prevented the discharge from becoming septic.

Thus it continued until February 21, 1888, when, assisted by Dr. D. M. Taylor, of New York, I enlarged the counter-opening to the width of one and a half inches, and was thus enabled to get two fingers up beneath the ribs and feel for some distance a smooth surface which I considered diaphragm. All the way up to this surface could be felt thick bands of fibrous tissue. I aimed at closing this cavity from the bottom. It became a sinus which very slowly narrowed and shortened, until to-day it is but three inches deep and holds a tube of one-quarter of an inch calibre.

If the foregoing be analyzed, it will be seen that, excepting some small portion beyond reach and attached to the diaphragm, I had removed all the spleen by November 26th, six weeks subsequent to the splenotomy. By December 22d, even this remnant had sloughed away, and everything indicative of retained spleen had ceased to appear. In this statement I am leaving the thickened capsule out of consideration. From December 22d, the condition was that of an indolent cavity lined by fibrous tissue, the thickened capsule, and adhesions. This tissue had to come away, and would have done so much earlier were the cavity in a different situation; but here, with the stomach and bowel changing their capacity from time to time, on one side, and the prominent ribs more so from emaciation, on the other, there was no way of making pressure; hence air could not be prevented from entering the cavity, rendering it septic and indolent.

The dangers of the case were hemorrhage and pneumonia. October 14th, the patient was moribund. Dr. Hearn gave ether. Her condition, the ether, and subsequent exposure to a draught caused a bronchitis, which in the following two weeks gradually developed into a marked case of broncho-

pneumonia of the right chest, helped on to some extent by the administration of morphia, indicated by extreme restlessness. By November 5th, the pneumonia became a pleuro-pneumonia of a very painful type. But it seems as if the pleurisy was conservative, for the inflammation with its occurrence reached its limit, and the lung condition gradually cleared up, contrary to my faintest hope.

But the chief danger was hemorrhage. For the first six weeks there was a continual loss of blood; and whenever any spleen was removed, no matter how small the piece, bleeding occurred. The continual oozing from the spleen prepared for the removal of the greater part of it with a minimum loss of blood at the time. In character its tissue was chiefly fibrous, with considerable contractility, and did not regain blood as freely as it lost it; hence it became less vascular the more it oozed. But when the part removed had considerable thickness, the deeper layer was actively red, and bled freely. A little pressure with the finger over the bleeding area, hot water irrigation, or, in case of failure from these, plugging with lint or gauze, always arrested it.

The extreme condition to which she was reduced by the loss of blood and the attack of pneumonia was hown, October 25th, in a serous discharge from the left ear, which continued for some time, while at the same time occurred a singing noise in the right ear, ending in complete deafness of that ear, which lasted two weeks.

As to remedial measures I have little to say. Alcoholic stimulants fulfilled a useful purpose; at times I used them very freely. But I must say that, second to opening the spleen, hyoscine hydrobromate saved the woman's life. She passed nights and days without sleep—a hyper-nervous condition, due to anæmia and exhaustion. At the same time she had pneumonia. I tried all the hypnotics, only to fail; at last I reached hyoscine, and obtained the happiest result by combining $\frac{1}{100}$ grain with $\frac{1}{6}$ grain of

morphia. With this dose hypodermatically every night, I had control of her nervous system.

Remarks.—The diagnosis of the case can not be hurriedly dismissed. October 3d, I agreed with Prof. Bartholow that it was a cyst, and probably hydatid. The points leading to this conclusion were, besides the physical signs, the duration of the case, its gradual development, the exclusion of malarial disease, and a history of the patient living four years prior with a family possessing six dogs. The following few days I aspirated particularly to establish the character of the fluid. Chemically and microscopically it exhibited the characteristics of hydatid fluid—a sanious fluid, containing flakes and membrane, and a large amount of chloride of sodium. Microscopically, I could not say I found a hooklet. Rupture of the cyst, extravasation and decomposition of its contents, might explain their absence. But, whatever doubt I may have been in, after opening the spleen and finding no distinct cyst, cleared up November 13th, when I removed the piece of membrane which I show you. I believe it to be part of a large cyst wall. One surface is pyogenic, for the sac must have undergone inflammation; the other surface is rough with attached portions of spleen.

The gradual development, duration and character of the symptoms are against abscess. Even the pus was not the characteristic chocolate, icterous kind belonging to abscess.

The spleen tissue, of which I made many sections, shows a marked hypertrophy of its fibrous framework, fibroid degeneration of its follicles, and almost complete absence of its pulp—splenic hyperplasia. What was the cause? In the beginning, probably pressure; then rupture perhaps of a small cyst causing irritative or septic inflammation of the spleen as a whole. The size of the organ was due more to the hyperplasia than the cyst which was entirely beneath the ribs, the remainder of the tumor to the crest of

the ilium being hypertrophic spleen. And hence the late diagnosis of cyst. Such was the condition of things up to September, 1887. At that time I believe the cyst deep beneath the ribs, of which I obtained the wall, ruptured and caused the aggravation of symptoms that developed at this time and called for operation. It was the extravasation of fluid out of the cyst that caused increased abdominal prominence and allowed the detection of fluctuation. As of interest in this connection, I have a note dated May 25, 1838, from Prof. Charles Jewett, of Brooklyn, who saw the patient in that city in May, 1887. He writes that he found an abdominal tumor, extending from the level of the crest of the ilium up behind the lower border of the ribs on the left side, which he identified as spleen. On aspirating the tumor he obtained a few drachms only of a thin, grumous, bloody fluid, and concluded the spleen was in a condition of degeneration. He also drew off between one and two quarts of what appeared to be pleuritic fluid, on aspirating the left chest, by puncture, just below the scapula and midway between the mid-axillary line and the spinal column. No examination of fluid was made. The needle was passed far enough only to perforate a thin chest wall. He considered the effusion as secondary to the trouble in the spleen.

My claim to performing splenectomy may be questioned. First, because I did not remove the spleen by a single technical operation. Second, because it doubtless will be said only postmortem could I prove the absence of the organ. The first objection I would answer thus: The term ectomy can have at least practically no reference to the time taken or the means employed in the removal of an organ, except the initial use of a knife. It may be done in one operation, it may require twenty. If the organ is removed completely by deliberate interference, it is an ectomy. This was technically and intracapsular splenectomy; for the spleen substance was removed from

within its capsule. Not one piece was removed to which was attached a piece of capsule. But the subsequent history of the capsule I have already given. It was thrown off by nature as useless, but slowly on account of its thickness. Hence the whole organ, the spleen and its capsule, was removed—a splenectomy.

As to proving that the organ is entirely gone, I would say this though it is but a repetition. By November 26th, only a small piece of spleen could be detected. Then began to appear a granular debris the result of sloughing of this piece. By December 22nd, the debris which I considered characteristic of sloughing spleen ceased to be discharged. February 21st, when I was able to get two fingers up under the ribs along the diaphragm, I would have detected spleen tissue if any existed. And if it was there, the curetting surely would have exposed it. Hence I conclude none remains.

The conditions of the capsule I believe to have been an element of safety. Whenever I aspirated the tumor, the needle, after piercing the skin, seemed as if passing through leather. The patient remarked that all the other physicians who had aspirated or injected the organ were surprised at the toughness and density of its covering. In the lips of the wound made to enter the spleen, the unusual thickness of the capsule was plainly visible. It was thickened from capsulitis. A knowledge of this made me less timid in stripping off the spleen from the capsule and insured less danger from hemorrhage.

The blood examined shows strongly a large increase in the white cells, but not more than a person losing as much blood as she has lost would be expected to show. An accurate count was not taken, because she was never deemed to be suffering from a blood dyscrasia, and her spleen was so gradually removed and with so much hemorrhage, that no conclusion could be drawn from an examination of the blood. She is very anæmic, and has not menstruated

since before the operation. I can find no enlargement of lymphatic glands. A symptom said to follow the removal of the spleen, namely, an enormous appetite, she did have for about a week in December, the time the last of her spleen disappeared.

In concluding, I would call attention to the chief thing of interest in this case—the gradual, piecemeal removal of the spleen. The question of cyst is of second importance. It is, I feel certain, the first time that the spleen has been deliberately, though gradually, removed from within its capsule. It establishes this precedent, that a hypertrophic spleen undergoing septic degeneration can, with safety, be opened and although slowly, yet successfully, be removed piece by piece.

DISCUSSION.

DR. GOODELL: I wish to congratulate the reader upon the happy issue of this admirably managed case, but I really do not see how he can call it a splenectomy. The matter of a name is important here from its bearing upon statistics. This case seems to me to be a splenectomy with sloughing of the spleen: nature did the splenectomy. Splenectomy is a very dangerous operation; the percentage of deaths in all recorded cases being seventy-one. In leukæmic spleen it is almost always fatal, there having been but one recovery in some twenty cases. In hypertrophied spleen it is also very fatal; one recovery in fourteen recorded cases. In wandering spleen, on the other hand, the pedicle being lengthened, the organ is got at with less difficulty and the great majority recover. So, too, in splenotomy for cysts the great majority recover.

I once did a splenectomy, though unwittingly. The mass was adherent to the omentum and I thought I was removing an omental sarcoma. The diagnosis previous to operation was ovarian or omental tumor, sarcoma in all probability. Examination showed it to be a leukæmic spleen, which weighed six pounds. The patient died in a

few days from embolism. Although the case of Dr. Downes should not be recorded as a splenectomy, he showed just as much pluck as if it been a case of splenectomy.

DR. G. G. DAVIS: There is an interesting question here as to the etiology. The case was septic when Dr. Downes saw it, but what was the origin of that sepsis? The germs must have been introduced from without and probably through the trocar at the first tapping, as in cases of pleural effusions which are at first serous and then purulent. May it not have been a case of hypertrophied spleen rendered septic by repeated tapping with septic trocars.

DR. DOWNES: I expected the name to be objected to. Nature did not begin to remove any of the spleen until six weeks after I had begun my work, and when, with the forceps and fingers, I had taken away as much or more tissue than the bulk of a normal spleen.

THE PROGRESS OF SURGERY.

BY

SIR G. H. B. MACLEOD.

M. D.,

Regius Professor of Surgery in the University of Glasgow; Surgeon-in-Ordinary to the Queen in Scotland.

Read to the British Medical Association,
Aug. 9, 1888.

British Medical Journal.

Gentlemen:—Deeply sensible as I am of the honour done me in being entrusted with the Address in Surgery on this the first occasion on which your great and important Association has visited this city, I am nevertheless overwhelmingly conscious of my inability to do

justice to a position which has been on previous occasions filled by representatives of all the great schools of this country. Your indulgent kindness can alone sustain me in my attempt to follow in their footsteps.

It is my wish, in the time devoted to this address, to attempt a brief epitome of the leading advances which surgery has made during the auspicious reign of Queen Victoria, as that period is naturally suggested by recent events, and is one over the great-

er part of which my own recollections extend. It is fully admitted that in every department of human knowledge our half century has been signalized by a progress greater, more momentous and more permanent than any other in the world's history; and in this advance medicine in all its branches has so largely and bountifully shared that even a bare recital of what has been done fires the imagination and makes the heart throb with triumph.

Since 1837 all the collateral sciences on which medicine so largely leans have been in a great measure reconstructed, and the very foundations on which our art is built have been in no small measure relaid.

It is with pardonable pride that one speaks of medical science in this nothern land, where for so long a time it has acquired a high place by the fruitful labours of many devoted men; and with no department of the one great and invisible art have the names of Scotchmen been more honourably associated than with that which I to-day humbly represent. We are met in the city where Peter Lowe early sowed the seeds of surgical knowledge and founded one of the oldest of the corporations, and we are within the walls of the University where that modern steam engine was born which has more than trebled man's physical power, and has so largely contributed to the national success and well-being of mankind.

In this ancient institution, originally "part of the great corporation of the learned men of the world," and the daughter of that far more venerable University of Bologna, which has just celebrated her eighth centenary, men celebrated in all the departments of mental and physical science have lived and taught. Not a few who afterwards largely contributed to the reputation of other schools (Cullen, Black, Charles Hope, Wm. Gregory, Thomas Graham, Granville Pattison, Ure, Hooker, Balfour, Lister) began their career here as medical teachers—men who have gone elsewhere, like the wandering Scottish surgeons

of the Middle Ages, who in their time helped to enrich so many Continental colleges. We can not forget that the immortal Hunters were educated in Glasgow, and that from regard to his old school the elder brother bequeathed to us his museum, and in 1765 proposed to Cullen the establishment of a medical school, for which he offered to build a theatre, and teach for no other motive than the love of his art. The early history of surgical anatomy, too, owed much to Allan Burns, whose premature death deprived Glasgow of a man of the greatest promise. My time, however, will not allow of further local references, though one other fact I will state, as it may tend to show with what fervour and enthusiasm learning and medical science is regarded in Scotland. While in England 1 in 5,000 attend the universities, in Scotland 1 in 600 avail themselves of that privilege—a remarkable fact when it is remembered that the universities here at first possessed no endowments but the privilege of teaching, and the scholars no claim but ambition to learn. Of the 1,639 medical students registered last year in Great Britain, no fewer than 666 belonged to the Scottish schools.

To understand aright the position of surgery in 1837, a few preliminary leading facts must be stated. Before 1800 much had, no doubt, been done in anatomy by "the great masters," but as a science it has certainly been reconstructed within the last fifty years. The microscope and new methods of study have entirely changed its whole bearings. Comparative anatomy has assumed its appropriate place, and pathological anatomy has been created. To John Hunter (though derided and defamed by many of his contemporaries as a mere theorist) we owe more than to any other man. He brought order out of chaos, and established surgery on the only sure basis of observation and experience; making, as Malgaigne has well said, a science of what Paré and Petit had left but an "art." He was the teacher of the leading men who fol-

lowed (Abernethy, Lawrence, Cooper, Home and the Bells), and the inspirer of all that was best and most abiding in British surgery. Before 1800 the great Continental and British schools of surgery had been founded (Berlin, 1714; Edinburgh, 1719; Dublin, 1710; Paris, 1721; London, 1750; Vienna, 1750). The old Academy of Surgery in France, which had achieved much, died with the other medical schools of that country, at the hand of the revolution, whose centenary falls this very year. "Knowledge" was said to be "aristocratic," and medical science was not made an exception till the needs of the great war, in which 600 surgeons fell in eighteen months, recalled to life the medical institution, of France, and inspired them with an energy and enthusiasm without parallel. Desault, one of the greatest surgical teachers who ever lived, died amid the throes of the revolution. It was well said that when men amidst the crash of all order did not know where to look, "Desault showed them the way, and led them to the Hôtel Dieu." He and Dupuytren, who succeeded him, established a great school, though neither contributed directly hardly a line to the literature of their profession. Bichat, the pupil and literary executor of Desault, did for general and pathological anatomy in France what John Hunter a quarter of a century before, had accomplished for us. He died in "the glory of his manhood" and of his literary fame, at 31 (an age at which it is said Hunter could hardly read), having in the short space of 2½ years revolutionized medicine in France. He passed the torch to Laennec (whose great discovery of auscultation was made public in 1819) and Bayle; and above all to Dupuytren.

From the beginning of the nineteenth century up to 1837, two figures stand out from the great throng of the distinguished surgeons of that period, Dupuytren in France, and Asley Cooper in England. They had much in common, but more that was dissimilar. Both were absorbed in the

same pursuits—anatomy, experimental physiology, and pathology, in their bearing on practical surgery. Both possessed a perseverance and a devotion which has been seldom equalled, and never excelled, an originality too, which sought to conquer everything for themselves, and a success which has never been approached. Here, however, the resemblance may be said to cease. Cooper's generous and open disposition made him beloved of all; while the gloomy hauteur, crafty malignity, and unscrupulous selfishness of his rival, caused him to be feared and hated. Notwithstanding this, Dupuytren was beyond question the greatest teacher of the age, beyond all others inspiring the men who afterwards became the glory of the French school. Nélaton, the "most modest and one of the greatest" of surgeons, whom many of us knew, was his assistant and successor, and the last who gained his chair by "concours" (1851). Cooper survived until 1841 (he was a candidate with the great Duke of Wellington for the Lord Rectorship of this University during the year of the Queen's accession), and was universally regretted; while, when Dupuytren died in the zenith of his fame in 1835, it was said that the surgical world was relieved "from the burden of his authority, which had pressed on it like a nightmare."

Almost contemporary with these men (he died in 1826) was Scarpa, who in Italy worked much on the same lines, but from the slight international intercourse which then prevailed, they knew but little of one another's labours. Incredible as it may seem, we have it on the best authority that the doctrines of John Hunter were hardly known in France for forty years after they were promulgated, and in the first edition of Boyer's classical work on *Surgery*, published in 1814, the labors of the English and Italian schools are ignored. After the peace of 1814, surgeons on either side of the Channel became, for the first time, acquainted with one another's progress, and Roux's celebrated *Parallels* spoke with enthusiastic ad-

miration of the courage and enterprise shown by British surgeons in tying the great vessels, resecting joints, and promoting early adhesion. Then it was Boyer wrote that "surgery seems to have attained the highest degree of perfection of which it is capable!"

Between 1796, when Abernethy first tied the external iliac, and 1827, when Mott ligatured the common iliac, all the great vessels (including the abdominal aorta) had been tied in Great Britain and America.¹

In 1837 the doctrines of Broussais, which had been accepted with the enthusiasm of a revelation, and had deeply imbued the surgical as well as the medical practice of the day, had spent their force. Hahnemann and Brown, Gall and Spurzheim, had come and gone with their disturbing influence, and men turned wearily from the discussion of mere doctrines and the dogmas of authority to a careful study, aided by experiment, of *facts*. Many remarkable discoveries in mechanical science, especially that of the achromatic microscope (1824 and subsequent years), the spectroscope, and the applications of electricity, powerfully contributed to the rapid progress of biology, morbid anatomy, pathology, and chemistry. In 1838 Henle and Mandl made known what their countrymen had then accomplished, and the members of the German school have ever since been the most enthusiastic and competent workers on these subjects.

The most distinguishing features of the period under review (1837 to 1887) have undoubtedly been anæsthetics and antiseptics. They are both "epoch-making" discoveries. Each has done almost as much for surgery as the discovery of hæmostatics, and when combined may, I think, be said

to excel even steam and electricity in their gracious benefits to mankind. Though from the earliest times men sought for the means of allaying pain during operation, and numerous imperfect methods (as that of Dr. James Moore, of this city, the younger brother of Sir John Moore, by compressing the nerves) had been tried to effect it, yet the statement of Velpeau, published in 1839, may be taken as expressing the opinion held seventeen years before the great discovery—"All research for an agent to destroy pain in operations is a mere chimera and unworthy of further consideration." Suddenly, however, the riddle was solved by one who, recalling the experiments of Humphry Davy with nitrous oxide and sulphuric ether, dimly perceived the use they might be put to in surgery. Whatever credit in this matter may belong to the unfortunate Horace Wells, it was really Mr. Morton who worked out the practical application of ether, and in the theatre of the Boston Hospital may still be seen the sponge by which it was administered on that memorable October morning in 1846. Many of us can still recall the enthusiasm which that discovery evoked, and the unbounded anticipations which it suggested. After the abortive trial of various other agents, chloroform was brought into use by Sir James Simpson within a year of the time when attention was directed to the subject. This the most valuable of anæsthetics, was discovered by Soubeiran in 1831, and had been shown to be a powerful anæsthetic by Flourens some years afterwards. Many years have passed, but we remember with amused astonishment some features of the warm controversy which arose regarding these agents—the objections ("religious" and other), the endless discussions and statistics—the hopes and fears which were expressed. It is not, perhaps, too much to assert that the relative merits of these and other anæsthetics, which I need not stop to enumerate, have not even now been universally determined.

¹ External iliac by Abernethy in 1796 and 1806; primitive carotid by Cooper in 1805; subclavian, attempted by Cooper 'n 1806 outside of the scalenus; the same by Ramsden of Edinburgh in 1809; inside scalenus by Colles in 1811; internal iliac by Stevens of Santa Cruz, 1812; common iliac by Gibson, of Pennsylvania, and Mott, in 1827; innominate by Mott, 1819; abdominal aorta by Cooper, 1817; brachial by Mott, 1818.

I myself, after fairly trying most of the agents in use, now exclusively employ chloroform, and having for years kept an accurate record of its administration, and given it freely and without stint in all sorts of surgical proceedings, never refusing its benefits to a single patient, no matter what his condition or the operation to be performed, I have never had an accident except once, when an epileptic took a fit while being put under its influence, and died with a full and fixed chest. For speed and energy, for ease of application and agreeableness, for rapid recovery with little subsequent trouble, and for safety *when properly administered*, chloroform is, in my opinion, unrivalled. That it needs no apparatus but a towel is a great point in its favour. This is the record of one who has administered it constantly almost from the time of its introduction into practice, and the statement in this sense may not be without its value. I never measure the quantity used, but exhibit it freely, and take the colour of the lips and the respiration as my chief guides. Making the patient count at the beginning of the administration is a most valuable aid; and Nélaton's inversion of the body with artificial respiration is, I think the surest mode of resuscitation in danger from failure of the heart. A minute is about the average period for inducing insensibility; and it is very rare, if proper precautions are taken in the way of preparation and after-management, to have any sickness. There is little doubt that "nervous" persons and those who are intemperate in the use of alcohol, tobacco, and narcotics, and also epileptics, require special care. Over-saturation from the too frequent renewal of chloroform induces, in my opinion, the chief after-trouble.

Local anæsthesia in its present form is also a conquest of the last half century, and though many agents possess this power, and some of them, like cocaine, are specially valuable for particular purposes, the finely-divided ether spray introduced by Dr. Richardson (a distinguished student of the

Glasgow school) in 1866, is more efficient and easy of application than any other for practical purposes. Finally as regards this point I may note that Braid, of Manchester, who published in 1843 on hypnotism, caused interest in a system which had been largely tried in India, but which has now fallen entirely out of use.

I need hardly say that anæsthesia has changed the whole face of surgery. "The lion heart" is no longer the requisite of a surgeon. Finesse and manipulative skill now take the place of force. Innumerable operations are rendered possible which could not before be attempted and the surgeon has benefited almost as much as his patient.

It was in this school that the other great improvement of our time, the use of antiseptics in surgery, was practically applied, so that I might be pardoned if I spoke warmly and enthusiastically of that invaluable discovery. But as its principles and practice (though doubtless much modified and simplified of late years) are so well known, and have been so much discussed in former addresses to your Association, and in the whole range of our professional literature, I have no excuse for dwelling upon it at any length now. Suffice is to say that, notwithstanding all the criticism and opposition which it has met with, the fundamental principles on which it rests remain, in my humble opinion, unassailable, and that it has led to practical results (not aloné in its immediate effects, but in the discussions and studies which it has produced) which have, in an extraordinary degree, widened the domain of our art, diminished the sufferings, and saved innumerable human beings.

The study of micro-organisms which a quarter of a century ago were mere microscopic curiosities have been an outcome of the controversy. Within a few years the tracing of the life-history, varieties, and changes under cultivation of bacteria has become a great and enthralling pursuit, and has opened up a field of practical applica-

tion, not in medicine and surgery alone, but in hygiene and public health, which the most far-seeing cannot pretend to limit. The present tendency is, perhaps, to exaggerate the influence of microbes, to take effects for causes, and ascribe to their agency almost every ailment. It was not till 1837 that the true nature of the yeast plant and its effects on fermentation were discovered, and as many diseases were long thought to arise from a process similar to fermentation, an entirely new view of pathological phenomena was suggested. The remarkable observations of Koch on the bacillus of malignant pustule foreshadowed what has been done for other similar disease-producers; and now what was lately but a dream seems, by the revelations of experimental pathology (for clinical observation alone would take generations to accomplish it), to be capable of realization in the near future: namely, that every zymotic disease, and all those which owe their origin to putrefaction and fermentation, will be finally stamped out. What a consummation if septicæmia, pyæmia, erysipelas, puerperal fever, spreading gangrene, *et hoc genus omne*, were arrested at their inception, yet such promises to be the reward of those methods of study now pursued, which teach us the nature and varieties of the morbid agents, their different modes of propagation, their channels of access to, and exit from, the body, with their effects under different conditions on the tissues and the economy.

The practical application of aseptic surgery has amazingly augmented the importance and value of the surgeon's services, as the advantages of that system cannot be secured without wide knowledge and great assiduity on his part. Perfect drainage; entire rest, both mechanical and physiological² (which includes the avoidance of all tension in the wound), and such attention,

to hygienic and constitutional conditions as will maintain and increase the resistance of the tissues, and of the general system, to the invasion of disease, are essential to the "system" on which wounds are now treated, and demand the most assiduous care from the practitioner. Of the many germicides which have been used I undoubtedly prefer the bichloride of mercury, which, with the soft alembroth lint and Gamgee elastic absorbent wool, are most perfect local applications. Dry and elastic dressings (the many medicated and absorbent wools, cottons, and lints now in use) have been, in my experience, most valuable advances in wound management. With reliable antiseptics (that is, agents which are capable of destroying the septic germs, or, at least, inhibiting their development, without at the same time causing local or constitutional harm), and with a scrupulous attention to details which must never flag, almost every organ and cavity of the human body may be, and have been, invaded, in some cases, perhaps, with too confident temerity.

There is no more interesting study in surgical history than the development of our present practice as regards wounds, from the blind groping of the surgeons of last century to discover the secret enemy which baffled their best efforts, to the brilliant dawn which we have been permitted to see. Hunter, and others before him, recognized the evil effects of atmospheric air, especially as met with in hospitals, and futile attempts were made to exclude or mediate it with various gases and fluids. The exigencies of military practice brought about the substitution of pure water for the filthy poultices, ointments, and balsams, and simplified the mechanical appliances in use in civil practice. Irrigation followed the entire submersion of the wounded part (1839), and cold affusion, which became the fashion in both medical and surgical practice, culminated in the hydropathic system of the Silesian peasant, Priessnitz. The "glyceroles" gave place to disinfectants (iodine, the salts of

² I desire here to express my great admiration of Hilton's Lectures on Rest and Pain. I consider them to be the most suggestive contributions to surgery which have appeared in my time.

iron, alcohol pure and variously combined, chlorate and permanganate of potash, and many other agents), and of these, coal tar and its compounds attracted most attention. "Occlusion" by various plans, collodion, gums, gold-beaters' leaf, "insufflation," filters of purified cotton, wool, etc., had all their day, till, finally, in 1860—1 Lemair, and in 1865 Declat, used phenic acid, and Pasteur's researches about the same time explained its remarkable properties. Independently, however, of Lemair's observations (published in 1863), and inspired alone by the discoveries of Pasteur, Sir Joseph Lister a few years later, 1866—7, used the same agent; and to his indomitable perseverance, scientific discernment, and philosophic grasp of the subject, we owe that practical application of antiseptics which has founded the "system" with which his name will be ever indissolubly and honourably associated. The rubber tubes of my old friend Chassaignac (1851), and the other means for securing drainage (bone and glass, metal and spiral wire drains, horsehair, catgut, etc.), the metallic sutures, which, though described by Fabricius and others, are often erroneously attributed to Marion Sims,³ the ligatures⁴ rendered aseptic and so fundamentally different in their behaviour from some of these same materials as used by Crampton, Physick, Wardrop, Cooper, and others, have been the outcome of, or made subservient to the antiseptic method. The proper use and best form of deep and superficial stitches and dressings are now well established, and the reign of dirty sponges and foul instruments and hands has passed away for ever. Modern pathology has put an end to the keyen controversies which for 150 years bulked largely on surgical attention regarding purulent infection. The direct absorption doctrine of Boerhaave

held the field till the middle of the eighteenth century and was followed by the hydraulic, the metastatic, the spontaneous generation, the phlebotic (in various forms) and other theories, till Virchow (1846—56) threw a new light on the subject by his researches on thrombosis and embolism, after which the investigations on sepsin, blood ferment, and micro-organisms explained what was still unintelligible.

As a result of the misfortunes of the Crimean war, and to a less extent, perhaps, from the alarm caused by the cholera epidemic of 1852, the construction and organisation of hospitals and other public institutions have received more attention during the last 25 years than during the previous 75 which had elapsed since Tenon wrote. The official statement in 1861 of the insalubrity of the Parisian hospitals (where it was said that it was the exception for a patient to recover from any important operation, so that many of them had to be abandoned), from the effects of that "hospitalism" to which Sir James Simpson in 1860 vividly drew attention, helped largely the progress of this question. That intra-mural hospitals are, however, on their trial, cannot be doubted, notwithstanding the immense addition which antiseptics have made to their salubrity; and the multiplication of village infirmaries, country adjuncts to city hospitals, and convalescent institutions since 1860 is evidence of the belief that smaller establishments in rural districts meet modern ideas more nearly than huge piles without space for fresh air and recreation, in the dense and polluted precincts of our great cities. I cannot avoid in this connection referring to the good that has been done in late years by the use of ambulance wagons, after the American model, for the conveyance of the sick, and for the instruction of many in the first care of the wounded. The nursing sisterhoods too, which originated with Miss Nightingale, are now our most valued assistants, and have been of unspeakable benefit to both patient and surgeon,

³ Sims curiously thought metal sutures were the great surgical achievement of the century and "one of the most beautiful examples of the inductive philosophy!"

⁴ Chinese silk, doeskin, tendon of moose and Carribbean cariboo, of reindeer and kangaroo, aorta structure, silkworm and catgut, metal, india-rubber, vegetable fibre, etc.

while they have given an aim and object to the lives of many refined and cultivated women, by supplying them with a field well fitted for the display of their best and highest qualities.

Of the advance in doctrine and practice since 1839 much might be said. Not only has general anatomy been greatly advanced, but pathological anatomy has been created, while physiology has become a new and practical science under the influence of experiment. Chemistry has also been reconstructed. Experimental and microscopic research have elucidated to a remarkable manner the whole phenomena of inflammation and the febrile condition. The blood and its vessels, the reaction of the tissues involved, the part played by the nerves, the nature of the exudations, with their destinations and changes, as well as the growth, degeneration, and metamorphosis of structures, have all been laboriously studied by the aid of the microscope and by chemical processes. It was within the years 1838-39 that the cellular pathology was born. It took the scientific world by storm. Though, no doubt, it can be plausibly asserted that both John Hunter and Raspail dimly foreshadowed it, certain it is that Schleiden, Schwann and Müller, laid its true foundations, while Virchow and his pupils worked it out. Constant advance continues to be made by the use of new and improved methods of research, so that our knowledge of the ultimate elements of the tissues is daily increasing. An immense scientific activity followed the year 1840. Within a few years almost all the tissues and organs and the secretions of the body, both in their normal and altered conditions, were laboriously studied, and the phenomena of the respiratory, digestive, and nervous systems, as well as the great subject of embryology, which throws so much light on congenital deformities, were largely investigated, and by none with more ability than by my late colleague Professor Allen Thomson.⁵

Within the last half century, and especially since the discovery of anæsthetics, all surgical operations have been greatly improved, and many new ones have come into use. The operator being no longer hurried, or his feelings harassed by the sufferings of his patient, and happily possessing better control of the result, is left free to plan and conduct his operation without embarrassment.

In this progress of operative surgery, amputation has largely shared. The improved methods of arresting bleeding, both during and after operation, have essentially contributed to its perfection. The india-rubber (1873), and more lately the spiral-wire tourniquets of Esmarch, and the "bloodless" system (though now no longer carried out as at first practised), which these appliances rendered so easy of application, have been of the most eminent service in amputations and excisions, as well as in all operations on bones and deep structures. The old method of closing arteries by torsion (used by Galen and Avicenna, but more especially studied by Amussat in 1829), was much in vogue a few years ago: but it and acupressure (described by Heister and many others), which Sir James Simpson (1859) supposed would supersede all other hæmostatic methods, have been replaced by the antiseptic ligatures now in use. The modern practice of using water at a temperature from 120° to 160° F. for the arrest of oozing is in my experience admirable.

Amputation by the circular method, after being exclusively used for over 1,800 years, was largely superseded by the flap operation; and in the Scottish schools, from the example set by Syme and Liston, it came into almost universal use forty years ago. The extraordinary dexterity ("his operation

⁵ The microscope in 1835 discovered for the first time the *acarus scabiei* and drew attention to the important kingdom of parasites. After that time the *achorion Schoenleini*, *tænia*, *trichina*, the *filariæ*, etc., were demonstrated, and their clinical aspects investigated. Marshall Hall's great discovery of reflex action, and the chemistry of the urine as applied clinically, also date from a period subsequent to the Queen's accession.

was as a flash of lightning compared with others," Fergusson), with which Liston amputated the thigh with only one assistant to hold the foot; compressing the vessel, and retracting the flaps, with one hand, while he cut and sawed with the other, is still a tradition of the Edinburgh school. The "oval" (or method in *r*), so much employed at the joints, was introduced by Scoutetten in 1827; and the less known oblique or elliptic by Soupart in 1842. Innumerable varieties of the three leading methods, as regards the length, shape, number, and the tissues constituting the flaps, have been introduced into practice within the last forty years, and many of these have proved most useful. The square flaps of Teale (described in 1858), and now generally made with less disparity between their relative length, give an admirable result at some parts of the limbs. The other "modifications" of the standard methods at some places are endless, as for example, in the neighborhood of the knee, but some of these are both fantastic and useless. Carden's and Syme's amputations are perhaps the most successful methods in use, and little improvement has been made upon them by the changes on the original plans which have been proposed at various times. They conform to most of the conditions requisite to a good method of amputation—viz: sufficient and healthy covering falling easily into place and being easily retained, the blood-vessels, nerves and cicatrix kept out of the way of pressure, the drainage perfect as the limb lies at rest, and all this with the least sacrifice of parts. Nowadays we must add that the operation should be performed at a place where a false limb could be best attached, as the modern improvements in mechanical science have altered the estimate we form of many procedures. Thus in Pirogoff's operation (1854) at the ankle, the stump is too long for a good foot to be attached, and Syme's method (even as now performed with a more limited heel flap) must yield to Roux's lateral internal opera-

tion, at least in adults, because of its greater facility of performance, better drainage, greater ease of retaining the equally good flap in position, and the less risk of sloughing from the better blood supply. The advantages of the osteoplastic methods, as in Pirogoff's and Gritti's amputations, in my opinion are more plausible than real.

Before the time when Syme's amputation became appreciated (that is before 1843), it was the practice to amputate below the knee for disease or injury of the foot, and that notwithstanding the fact that Lisfranc's and Hey's tarso-metatarsal amputation had been introduced in 1790, and Chopart's medio-tarsal in 1787. The longitudinal amputations of the foot have very properly almost disappeared from practice, as from the balance of the foot being lost, the result is not good; and the countless varieties of transverse amputations which have been suggested at various times have now almost entirely given place to amputation at the ankle-joint.

The amputation by which the bones forming the posterior portion of the tarsus are alone removed is still on its trial, and nothing need be said regarding it.

Excision of joints and resection of shafts of bone, now of daily performance, were by no means common at the time of the Queen's accession. True, most of the articulations had been cut out during the last century,⁶ but it was not till Syme published his book in 1831, giving an account of his results in shoulder and elbow operations, that the practice became general. Syme says that in 1826 amputation at the shoulder was the rule for disease of the head of the humerus; and even as late as 1844 Fergusson says excision of the elbow had not been done a dozen times in London. Syme afterwards—as Langenbeck also—removed the scapula as well as the head of the humerus rather than amputate the arm. In dealing with the knee-joint, however, Syme

⁶ The head of the humerus by White in 1768, the knee by Park, in 1782, and the elbow and ankle by Moreau in 1797.

failed, and it was reserved for Fergusson and his pupils, with Jones of Jersey, after 1850, to secure, amidst much opposition, that assured position for excision of the articulation which it now possesses. Better results will doubtless be obtained when there is greater experience in the recently suggested plans for fixing the bones by pegging, wiring, dividing the patella vertically or longitudinally, and afterwards wiring the sections. That excisions were in little vogue even as late as 1860 is evident from the statement of Fergusson, that at St. Bartholomew's the elbow had only once been operated on, and the knee never in that great institution till that date ("not a breath, not a pen, not a knife stirred in England on the subject").

Humphry's important researches between 1858 and 1862 on the growth of the long bones, contributed largely to the development of this question. In Germany and America much was done between 1830 and 1850 in excising joints, and most of the practical points connected with the subject were then worked out. The application of De Morgan's solution of chloride of zinc was a no mean contribution to the surgery of bone. We all know that even in the most unpromising cases much can be done by perseverance and patience, and sometimes by renewed excision; and the sharp spoon of Volkmann has in this, as in other operations, proved most serviceable. The emptying of the epiphyses (first used by Sédillot on scientific principles in 1858), the sparing use of the saw, and the careful discrimination of diseased from merely changed structures have greatly advanced excisions in these later years. The subperiosteal method (first suggested by Heine, of Würzburg, in 1846), though preserving not only the reproductive tissue, but also the insertion of the tendons, has been less used than was expected, partly because of the difficulty of accomplishing it in some cases, and in others from the excess of new bone formed becoming an embarrassment. Re-

searches on the functions of the periosteum have been most fruitful since 1858, and have, combined with antiseptics, led to great freedom in dealing with diseased bone; while osteotomy, though from early times applied to rectify vicious repair, false joints, and ankylosis, has, within the last twenty years, acquired a high importance as an orthopædic recourse from the practice of Annandale, Ogston, and above all, Macewen. No fact in modern surgery is more remarkable than the absence of all local and constitutional disturbance after these operations. To Adams, Sayre, Barton, Buck and Esmarch, we owe various valuable additions to our operative resources within recent times.

Phosphorus necrosis, the result of the manufacture of the lucifer match, which has been signalled as one of the important discoveries of the Queen's reign, was first noticed in Germany in 1843, but both it and "looking-glass makers' necrosis" have been happily stamped out within the last few years, mainly by improved methods of manufacture.

Operations on the jaws, which were so much dreaded fifty years ago, that excision of either bone was not infrequently preceded by the ligature of one or both carotids and by tracheotomy, are now performed with very little hesitation or risk. In 1844, both upper maxillæ were removed for the first time by Heyfelder, and in 1842 Maissonneuve excised both lower jaw-bones. The method adopted by the latter of twisting out the bone has facilitated and diminished the risk of the operation. Fergusson did much in this department to limit the amount removed, and to retain the more important parts of the frame-work as the floor of the orbit and the base of the lower jaw. The temporary displacement of both the upper and lower jaws has been practised since 1837 to give access to pharynx and palate.

Much good work has been done in all countries regarding the anatomy, pathology and treatment of diseased joints, since

Brodie first dealt with the subject in 1818. Richet added much to our knowledge by his treatise in 1844. Hip-joint disease has been specially elucidated since 1840; while during the twenty years subsequent to that date, Bonnet's most important observations were published. He combined in a remarkable manner experimental and clinical research to explain the physical signs of joint ailment, and defined the proper stage and limits of rest and passive motion in their treatment, as well as the operations for removing resulting deformities. His work marked a new starting-point in this department.

Within the last thirty years, the forcible rupture under chloroform of adhesions in joints (a practice borrowed from the bone-setters) has been much employed, as well as the free division subcutaneously of contracted structures. For the restoration of stiff joints, for rigid or irregularly contracting muscles, as well as for the removal of passive effusions, and strengthening weakened circulation and innervation, the value of massage is at last recognised in this country; and, though it threatens to become a fashionable hobby, yet it is, when properly employed, and especially when combined with the douche and electricity, capable of affording most valuable results. Inventive skill has provided us within the last few years with many useful splints for joint affections, and those of Thomas, Sayre and Bryant are well worthy of mention, as is Scott's mode of treating chronic thickenings which has come into use within the half century. In connection with bone affections, I shall merely mention osteitis deformans, described by Paget in 1877, and that form of neurarthritides which Charcot recognized and described; since which the dependence of certain joint affections on disease of the nerve centres and nerves has become well understood.

Tenotomy is practically another conquest of the last half century, as it was only in 1831 that Stromeyer perfected what was be-

fore a most incomplete process, and made it applicable to many uses.⁷ In 1835 Dieffenbach's work on club-foot showed how great had been the advance since Scarpa wrote in 1804. Little's book in 1837 started the practice of tenotomy in England. During recent years greater liberty is taken in the division of structures, but the antiseptic system has emboldened operators to adopt methods, some of which are both unnecessary and retrogressive, as in the open plan of treating club-foot. The excision of the astragalus, however, or the removal of a wedge from the tarsal bones may possibly be necessary in some very bad cases.

By the untimely and tragic death in 1834 of Delpech, who had established at Montpelier the first hospital for its practice, orthopædic surgery lost one of its greatest advocates. For a time subcutaneous operations ran much risk of abuse, especially in the hands of Jules Guerin, who in 1840 is said to have divided forty muscles, tendons and ligaments in one patient! The extraction of foreign bodies from the knee had then been rendered comparatively safe by the subcutaneous method. In 1851 it was stated at the Surgical Society of Paris that thirty deaths had resulted in 135 cases operated on by the open method, but now antiseptics have enabled us to revert with success to the old plan again; and Annandale's recently described proposal to suture loose semi-lunar cartilages is another triumph in the same direction. I may add to what has been said that Adam's observations on the regeneration of tendons (published in 1860) was a most important contribution to the progress of tenotomy. I shall not delay to allude to operations on the cleft palate, though all that has been done of value in that department may be said to date from 1840, but will pass on to remark that plastic or reparative surgery, both in its auto- and

⁷ Hunter divided the tendo Achillis for purely experimental purposes, and in 1784 it was cut in the human subject, as the sterno-mastoid was in 1822, but in neither case subcutaneously, as that term is now understood.

hetero-plastic forms, though long ago borrowed from the practitioners of India and Italy, took no root in Europe till after the large and varied experience of Dieffenbach was published, when many processes dealing with lost, deformed, and contracted parts came into use with most gratifying results. Ollier's suggestion to retain for periosteum in rhinoplastic operations has not met with much favor. The successful repetition in recent years of the Tagliacozzian operation by Mac Cormac and others is worthy of note, as is the proposal to replace the nose from the integument and even from the bone of the finger.

I cannot avoid mentioning that the plan of restoring the lower lip from the chin, so often ascribed to Syme, was first described by Professor Andrew Buchanan of Glasgow, in 1841.

Within the half century aneurysm has been much studied in all its aspects, and its treatment has been simplified, though the methods of dealing with it have been greatly multiplied. It has been shown to be curable by the rapid coagulation of the contained blood, and not alone by the lamination of fibrin and contraction of the sac, a fact long denied; and this has suggested some of the most recent methods of dealing with it. Up to 1842, when the Dublin surgeons laid down the proper mode of using compression, and improved the mechanical means of carrying it out, it may be said that the ligature was alone employed, for though compression in some form (on the surface of the tumor, or within it after it was opened, or over the whole limb, or proximal or distal to the sac separately or combined) had been long in use, it was on a wrong principle, as the whole current was stopped, and inflammation intentionally produced in the vessel. But whether applied by instruments or the hand (Vanzetti, 1846), the modern method, up to a very recent date, aimed at not entirely arresting the blood flow so as to promote a deposit of fibrin. This dates from between 1840 and 1850. The enthusiasm

with which it was pursued for some years has been hardly maintained, from the difficulties attending it, and its not infrequent failure. In some positions, however, it will be always employed; and the remarkable success in abdominal aneurysm obtained by Murray (1864), and in iliac aneurysm by Heath and Mapother, applied to the proximal side under chloroform, has been most encouraging.

The method of applying the ligature, which was the great achievement of Hunter (1785); together with the practice of Brashdor and Wardrop (1825-1827) and Anel have been again much discussed of late years and distal deligation has been frequently applied with signal success. Antiseptic buried ligatures, with antiseptic dressings, have again placed the use of the ligature in the ascendant, though it would be difficult to excel the success of Syme, who tied the femoral thirty-five times with only one failure before the modern methods were introduced. Since 1852, when Thiery used flexion at the elbow, Mr. Hart and others have applied it to small firm aneurysms of the popliteal with marked success (1858).

Galvanism, first used by Phillips in 1832, was unavailing for aneurysm till Pétrequin (1845) and Ciniselli improved the apparatus and the methods of employing it. Of less important plans we have had introduced since 1837: Fergusson's somewhat dangerous "malaxation;" Blake's displacement of clots by cataract needles; electrolysis with fine needles; acupuncture, now used by leaving gilded entomological pins for days in the sac; acupressure to the main vessel; coagulant injections (ergotine by Langenbeck in 1869, perchloride of iron, alcohol, acetate of lead, tannin, various acids, etc.): foreign bodies, as iron wire, horsehair, etc., passed into the sac (Loreta) or combined with galvanism (Barwell). These plans have been chiefly used when the aneurysm was so placed as to be inaccessible to the more reliable methods, and a certain amount of success has attended them. Syme's most

remarkable recurrence to the "old operation" of opening the sac cannot fail to be chronicled when speaking of aneurysm. His operations on the carotid, axillary, iliac and gluteal arteries were brilliant examples of bold and skillful practice. Perhaps the most striking, because most easily applicable and novel plan of treatment is, however, that introduced by Reid (1875), namely, emptying the limb entirely of blood by the use of Esmarch's bandage and cord, while the sac is kept full, so that coagulation *en masse* may take place, and subsequent consolidation be induced. That *in favorable cases* no harm arises either in the limb or within the body, though the treatment is kept up for hours, and, finally, that a *cure* is effected, are points of surpassing interest.

Finally, I may note that the confidence of the profession in the iodide of potassium has increased of late years as an internal remedy in aneurysm; and that the sedative effects of the bromide of potash are found of great service. On the whole subject of aneurysm, Broca's great work, published in 1856, is complete up to that date.

Modern research has greatly advanced the pathology and treatment of fractures and dislocations. Between 1847 and 1855 great attention was bestowed on these accidents. Astley Cooper's pioneer work (1822) did much for the elucidation of these subjects, which were then involved in great confusion; but it is to Malgaigne (1847) more than to any other man, and after him to Smith of Dublin, Hamilton of New York, and Gurtl of Berlin (1860) that we owe our present accurate knowledge. Nothing could excel Malgaigne's systematized and exhaustive researches. Treatment by weight and pulley of fractures of the lower limb, introduced in its present form from America in 1867 (but in use forty years previously) is a distinct improvement over the cumbrous long splint.

"The immovable apparatus" of the Arabian and Greek surgeons, as varied and im-

proved since 1834 by Seutin, Dieffenbach, and others,⁸ gives us great advantage in dealing with fractures. Many "mouldable" materials too (such as poro-plastic and gutta percha), which from their lightness and close application to the part are of inestimable service, have been added to our resources of late years. I would ask your attention to the ratchet, as seen in use in our hospital. I have used it for twenty-five years in the treatment of fractures of the femur and in that of hip-joint disease. It is a simple and most efficient method of applying and regulating extension. Salter's cradle (1864) and other ingenious methods of suspension have also been added to our means of treatment, and, from one cause or another, it fortunately happens that now ununited fracture and vicious union have nearly disappeared. Antiseptics and wiring the fragments have enabled surgeons to do away with the many methods of treating ununited fracture which before prevailed. Compound fractures have also lost their danger and rarely lead to amputation.

As to dislocations, the great achievement of the era is the substitution of manipulation for force in their replacement. This has been erroneously supposed to be a wholly recent idea, and to have originated in America. Not only did Hippocrates and Paulus Ægineta describe it, but Pouteau and Scultetus, and latterly Collin (1832), Desprès, and others both used it and described it accurately. Undoubtedly it has only recently become properly appreciated, and now it is universally employed. The use of anæsthetics has largely contributed to our means of replacing dislocated bones, and has entirely done away with the many "adjusters" which were at one time in vogue. We have with advantage adopted from the bone-setters the practice of freely breaking up adhesions formed in joints kept too long at rest, employing at the same time, if necessary, the subcutaneous division

⁸ Plaster-of-Paris, starch, glue, silicates, dextrine, paraffin, gum and chall-paper and starch, etc.

of contracted structures. "The mechanical tonic" of massage is in such cases also invaluable.

The surgery of the genito-urinary organs has been greatly pursued since 1837, and the mechanical appliance for treatment much improved. The pathology of stricture has been carefully worked out, and the treatment fitted for each variety discriminated. Smooth and reliable bougies, from the fine filiform size to the great bolts used by the Americans, can be readily obtained and dilatation becomes more easily managed. Internal and external urethrotomy, though neither of them new (the former dating from Ambroise Paré and the latter in one form from the Arabians), have been so improved by modern mechanical instruments as to have given us, in a large measure, the command of those troublesome affections. Electrolysis, too, has again come into use in strictures, with more promise of success. Syme's operation, first published in 1844, has proved most useful in the worst cases; and Wheelhouse's improved *boutanniere* has simplified a very difficult operation. Of urethrotomes there are no end, some cutting from before and some from behind, while others combine rupture or stretching with incision. Perrève in 1847 gave us the best instrument for rapid dilatation. Though using it frequently I have never seen any harm follow, while it has proved most serviceable in limited recent contractions.

I may remark in passing that the bougie-à-boule has supplied us with so valuable an instrument for recognizing the position and closeness of a urethral stricture, that no surgeon should be without it, and that the catheter coudé, if widely known, would, in my opinion, save many lives, as it allows an almost uninstructed man easily and quickly to relieve retention from enlarged prostate, when he should be baffled, or cause irreparable harm, with the ordinary instruments.

When chemistry had demonstrated the composition of urinary calculi it was hoped

that their solution within the body would be shortly accomplished with the same ease as it was attained in the laboratory. After many and varied attempts in different countries this has been abandoned, as has also the use of galvanism alone or with chemical solvents. At present this hopeful field of research may be said to remain barren of results.

In 1813 a Bavarian surgeon combined lithotrity with galvanism, and used large straight catheters for evacuating the *débris*, which by his drills and "bruisers" he produced, but with no good result. This, however, was the dawn of lithotrity, which now threatens to displace in most cases that lithotomy which, under various forms, has been in use for 2,000 years, and about which over 1,000 treatises have been written. Elderdon, of Edinburgh, described in 1817 the first lithotrite. Since then that instrument has been enormously improved in simplicity of action, form, and strength, chiefly by English makers, so that now it is capable, even in the smaller sizes, of breaking all but the hardest stones. The instruments used in the early days of lithotrity by Leroy, Civiale, and Heurtelouy were very complicated and varied. Some had even twelve branches for grasping the stone, and each stage of the operation needed a different instrument.

For over fifty years lithotrity has been gaining ground, and since 1878, when Bigelow introduced his litholapaxy, the whole practice has been so changed as to constitute an entirely new operation. The greater capacity of the urethra which Otis demonstrated; the immensely greater tolerance of the bladder to the presence of instruments which Bigelow showed to exist; and the improvements in the apparatus for breaking up and removing the fragments, together with the use of anæsthetics, have all combined to establish the triumph which has undoubtedly been achieved. The extension to young boys (even to infants, as has been lately shown) of the advantages of

lithotrity has also been attained, so that great size and extreme hardness are almost the only obstacles which now stand in the way of its universal application. With a better knowledge of the causes which produce calculus, an earlier recognition of its presence, and the modern system of removing it entirely at one sitting, it may be said that one of the greatest of human calamities has been nearly overcome.

Lithotomy had attained to great perfection before 1837, in the hands of many surgeons in all countries, and in none more than in Scotland. The "methods" employed in different schools were very numerous, though the lateral operation, performed with the gorget or simple knife, was that most followed in Great Britain. Very many modes of opening the bladder were in use in France, and there the now popular hypogastric operation originated (with Franco in 1561), an operation which by the use of antiseptic dressings and Petersen's (1880) rectal bags (suggested by Garson's experiments on frozen bodies in 1877), has been reintroduced as practically a new operation. The Suprapubic method was largely practiced by Cheselden and Frère Côme, who by the way used a perineal drain.

It is unnecessary here to allude to the many methods which have been used within the last half century for opening the bladder—the median, with or without the use of the lithotrite; the bilateral; the medio-bilateral, now largely used in France; the rectovesical—have all had their advocates, but in this school the rectangular plan of the late Professor Andrew Buchanan (1848) is now almost exclusively employed, and is, in my opinion, the simplest, safest and best method that has ever been suggested, as it provides the most direct access to the bladder, and is so simple that the least experienced may perform it with confidence. The only objection which has been advanced to the rectangular method is the difficulty of introducing the staff. This, I venture to

say, has been wholly overcome by an alteration in its construction, of which I published an account in the *Journal of your Association* in 1877; and I shall have much pleasure in showing it and the mode of its employment to any of your associates who may be interested in the subject. In connection with the genito-urinary organs, I may add that it was in 1834 that iodine injections in hydrocele were introduced into European practice by the late Sir Ranald Martin, and that at first their use was much opposed. Iodine injections, however, were quickly extended to the treatment of fluid collections in all parts of the body,⁹ and now it constitutes, for many purposes, one of our most valued resources. For spina bifida, as is well known, the combination of iodine and iodide of potassium and glycerine, introduced by Dr. Morton, of this city, has proved by far the most useful and efficacious of any of the plans of treatment in use.

I can not leave this part of my subject without at least referring to the remarkable advances which have been recently made in the surgery of the kidney; the confidence with which it is now stitched to the parietes when movable or opened for drainage or for extracting a stone (Morris, 1880), and the safety with which it has even been entirely removed (first by Simon, of Heidelberg, in 1869), has contributed to the solution of most interesting physiological as well as surgical questions. Then the ready removal of some growths from the bladder by perineal or suprapubic incisions, and the admirable results got by MacCormac and others by suturing the ruptured bladder (an idea thrown out by Benjamin Bell in 1789) and cleansing and draining the pelvis, are clear and important gains to practical surgery.

During the last half century venereal diseases have received great attention and a

⁹ By Bonnet, in 1837, to the joints; by Velpeau to hernia; by Dieulafoy to the abdomen; by Brainard to hydrocephalus; by Aran to the pericardium; and by others to affections of the chest.

new interpretation. Ricord, in 1838, by his experimental proof of Tode and Bell's views regarding the distinction between gonorrhœa and syphilis, removed the confusion which long followed Hunter's teaching on that point; but his views on the unicuity of the virus were overthrown by the researches of his pupil, Bassereau, in 1852, and the Dualists were left entire masters of the field, Ricord giving his adhesion to their doctrine in 1857. Now Mr. Hutchinson proclaims that doctrine as "dead," and the soft sore as being due to the inoculation of syphilitic pus, in which there is no virus, or in which its active qualities are destroyed. There can be little doubt but that constitutional disease often follows sores in which there is no characteristic hardness of base; but specific hardness, if present, is still of the utmost clinical significance. Thus, again, the question of whether there be one or two primary poisons has come into discussion, the knowledge now possessed of the effects produced by the inoculation of mere inflammatory products giving a new complexion to the question; while the dependence of both syphilis and gonorrhœa on micro-organisms is the growing conviction of many.

It was in 1857 that Clerc showed the different effects produced by the inoculation of the true chancre on persons already affected, and those who had not suffered from the disease, and two years afterwards the contagiousness of secondary, and even some tertiary, lesions (which had been wholly denied by Ricord, though to a certain extent proved by Wallace, of Dublin, in 1835) was amply confirmed. The communicability of the disease in vaccination came out in 1860. For a few years after 1850, syphilization attracted much attention, but it was soon seen to be founded upon an entirely false interpretation of facts, and the doctrine has long disappeared.

In the treatment of the later stages of constitutional syphilis, a great change has taken place in late years by the replacement

in a large measure of potash by mercury. When Wallace, in 1836, and Ricord subsequently, showed how efficacious the iodide which Brera had introduced into practice) was in dispersing the later manifestations of syphilis, a great gain was undoubtedly made, especially at a time when mercury was so much abused; but with improved and, above all, restricted modes of administration, mercury is now most trusted to combine with quinine, iron and other tonics to overcome the final assaults of this protean disease, and that even in scrofulous and unhealthy constitutions. Syphilis has, within my own recollection, greatly diminished in frequency and violence, though I think its commonness and its pernicious influence as an inherited ailment is far greater than is generally supposed. That the subcutaneous method of administering mercury, which some advocate, is not fitted for the long course of treatment now recognized as necessary for the eradication of the disease may, I think, be admitted, and that in private practice neither inunction (though greatly improved by the use of the oleates) nor moist vapour, can compete with the internal use of mild forms of the drug is, I think, equally certain. We owe much to the teaching of Mr. Hutchinson in this direction, as well as to his instructive views on the influence of idiosyncrasy in syphilis and in the action of the remedies employed in its treatment. Much clinical research is still required on many points especially on the congenital forms of the disease, before the subject is thoroughly understood. Since Diday wrote in 1836, great advance has been made, and a vast body of observations have been recorded regarding the syphilis of internal organs, and the countless forms in which the acquired and hereditary malady affects the various tissues of the body.

In recording the improvements in surgical practice in the department of the genito-urinary organs, I would very shortly note the greater command we now possess over fistulæ in the male and female organs,

brought about by improved manipulative methods. These improvements date chiefly from 1839, when Hayward, of Boston, took up vesico-vaginal fistula, and Marion Sims and Bozemann introduced wire sutures, covering plates, improved specula and the knee-elbow position. The labours of the unfortunate Jobert de Lamballe in this department should not be forgotten.

The surgery of the female reproductive organs is an immense subject, and has risen to the highest repute well within the half century, and has recorded triumphs of the highest importance to the comfort and life of thousands. Very many operations have been performed for the first time within the last few years, and others have been brought to great perfection. It has been unquestionably the extraordinary success of ovariectomy which has led to the rapid progress of abdominal surgery. We claim for Houston of this city (1701) the pioneer place in ovariectomy, though his operation was but the draining, and not the removal, of a cyst. M'Dowel, of America (1809), to whom the initial step is usually ascribed, and who operated, in all, thirteen times, was admittedly incited thereto by the teaching of John Bell, of Edinburgh, whose pupil he was. Lizars, of Edinburgh, operated repeatedly about 1825, and Clay afterwards continued the practice amidst disappointment and obloquy. Certainly ovariectomy was on all sides met with ridicule and contempt! In 1823, Boyer says, "the least reflection suffices to show the dangers and impossibility of this operation which has never been performed, and which never will be," and its position, shortly before it was taken up by Sir Spencer Wells (1857-59), is best shown by quoting Sir W. Lawrence's query whether it could be any longer pursued, "without damage to the character of the profession." It is undoubtedly the experiments of Wells on the union of serous surfaces and drainage, and subsequently on the command of bleeding and the treatment of the pedicle that we owe

the present position of the operation, though others have done much to make it not only a justifiable but an eminently safe operation, when the disease is early recognized and a careful aseptic condition assured. I may say in this connection, as it has a bearing on some discussions which have taken place, that when during operation the contents of cyst have escaped into the abdominal cavity, I have on eight occasions repeatedly poured from a kettle a 1-40 hot solution of carbolic acid into the belly, turning the patient on her side, so as to allow it to escape, and that of these cases seven recovered without any annoyance whatever. Almost all my cases in recent years have been operated on in the public theatre of the hospital, and without any special preparation a very different affair from the elaborate and fantastical precautions sometimes pursued abroad. The plan of twisting long pedicles, as I described some years ago, succeeds perfectly, but as the ligature and cautery combined have been so effective and reliable, I now prefer them in all cases.

Many most important operations in obstetric surgery have been introduced of late years, but these lie beyond my present theme.

Cysts connected with the liver and peritoneum; abscesses in the abdomen; fluid in the Fallopian tubes; extra-uterine foetation; excision of portions of the bowel; intestinal obstruction; cholecystotomy (Sims, 1878); improved Cæsarean section; and many other grave operations have been frequently performed, especially in America, within the last ten years. The recent remarkable results obtained by Apostoli in the treatment of fibroids and other uterine ailments by galvano-chemical cauterization can not be passed over in silence, as a painless, safe and manageable method of removing some very terrible ailments has apparently been attained by him, and the appliance is capable of extension to other surgical affections.

Colotomy, though suggested by Callisen in 1800 was really not put into practice till

1839, when Amussat, meditating on the death of Broussais from cancer of the rectum, determined to reintroduce it, notwithstanding its condemnation as impracticable by both Dupuytren and Velpeau. We all know how serviceable and simple the proceeding is, and we also feel grateful for the important addition to our resources in intestinal obstruction which Nelaton has made by his operation in the right groin.

Pathological research has done much within the half century as to the large and important subject of new growths. Much, however, remains to be done. Since Müller, in 1838, brought neoplasms within the pale of the cellular pathology, and Virchow added so much to our knowledge, innumerable workers, aided by many new or improved mechanical contrivances and beautiful methods of preparing sections for microscopic examination, have turned their attention to the subject. A simpler classification and arrangement have resulted, with a better understanding of the clinical progress and results of tumours. That carcinoma and tuberculosis are specific diseases due to a microbe seems to be accepted. That cancerous tumours are due to *materies* or virus in the blood, arising from congenital or acquired causes, and that the local outbreak is induced by some occult weakness of the part is generally admitted; but it is by no means proved, as some would allege, that the disease is at first wholly local, and consequently capable of eradication if early enough removed. On the contrary, my own experience, which has been large, tends to confirm the view that cancer, if once present, defies our efforts to cure it either by operation or any other means. From the simplest to the most "malignant" growth, the gradation is one of degree. We can extirpate and cure the lower or simpler forms, but the more complex defy us. The prior existence of a cachexia to the outbreak of cancer has now been abandoned in theory, as it has long been in common experience, and the later constitutional

empoisonment is explained on the ground of the non-exhaustion of the virus in the local outbreak, or the multiplication of the micro-organisms and the contagion of the morbid elements within the body. The first note struck in the modern theory of cancer was by Sibley in 1839. Cohnheim's "inclusive" or embryonic theory has now been before the profession for some years; and the heredity of neoplasms has been much but inconclusively debated. If any good is to follow operation in cancer, it must be from a very free and complete ablation, and antiseptics admit of this without increase of danger. The kelectome of Bouisson, the steel needles of Ciniselli, and other recent inventions permit the examination of the intimate nature of growths before operation.

In no department of surgery is so much that is new and notable been achieved as in injuries and affections of the head. Much has been done both by experiment and clinical observation in the localization of the phenomena of motion and sensation, and though much remains to be done which can only be cleared up by long and accurate research, still results have been garnered sufficient to give a confident hope that before long a complete and reliable map of the brain will be at the service of the practitioner.

The brain areas which supply the face, the tongue, the limbs and the muscles of respiration have been clearly defined by British and foreign physiologists. Clinical observations on man have supplemented experiments on animals, and already fruitful practical results have been obtained, so that the trephine has again come into use, but on far different grounds from those theoretical ones which guided its application at the beginning of the century. The first operation for the removal of a cerebral growth planned on the modern physiology was performed so recently as 1885. The new American perforator is much more precise and speedy than the old trephine, especially

when worked by the "surgical engine," which has been invented for driving saws and perforators.

In the treatment of affections of the spinal column, Sayre's plaster jacket and its modifications have greatly helped treatment, as have also the systematized exercises of the Ling and Roth methods in lateral curvature.

The improved laryngoscope of Czermak (1858) and Türck, which was the legitimate outcome of Babington's "glottiscope" (1820), and Garcia's instrument of 1854, has been invaluable in affections of the throat and nose. It has admitted of instrumental and other treatment (as in the case of the late lamented Emperor of Germany) which was before impossible.

Excision, partial or complete, of the larynx dates from 1856, and has now been many times repeated with increasing success, though its adoption in simple growths seems indefensible. Intubation of the larynx is another interesting subject which promises important results.

Amputation of the tongue has reached its acme of simplicity in Whitehead's practice with scissors, a bold proceeding rendered possible by the improvement in mouth-gags. I have been accustomed to use the *écraseur* or the thermo-cautery, and am not inclined to abandon them, as they have proved reliable instruments in such serious operations.

Numerous improvements have been made in operations on the palate, and in the construction of substitutes for it (especially those by Kingsley, of New York, since 1844), as well as in the closure of hare-lip, but time prevents me referring further to them.

External (Watson, of New York, 1884) and internal (Maisonnette, 1861) division of undilatable stricture of the œsophagus are proposals of recent years; while gastrostomy, first suggested in 1837 (the year before the celebrated case of St. Martin allowed the subject of digestion to be carefully investigated), has been rendered in-

initely more safe by Howse's proposal to secure adhesion between the stomach and the parietes before opening the viscus.

The draining of cavities in the lung has been added recently to our operative and curative resources with encouraging results. The difficulty lies more in an exact diagnosis of the position of the cavity than in the risk of the operation itself, for when there is but one to deal with, and it lies at the base of the lung, and the pleura is adherent over it, the operation is comparatively simple, for not only is mere puncture of lung tissue found to be attended with little danger, but even the removal of a portion of the organ ("pneumonectomy") has been suggested, and in one case partially carried out, in the excessive zeal of our time for sensational operations.

The whole subject of empyema has been carefully studied within the last few years, and the operation and its subsequent management by drainage and cleansing greatly advanced. Resection of the ribs ("thoracoplasty") and of all unyielding so as to admit of more complete draining and collapse of the cavity, which was a startling suggestion only five or six years ago, is now frequently and successfully performed, and has been the means of saving not a few lives which otherwise would have been slowly and hopelessly destroyed. This proceeding Estlander has systematized, and the operation often goes by his name. How great is the change of opinion as regards the operation for empyema since the time of Dupuytren, who preferred to die rather than submit to the risk of having his chest tapped.

Reference has already been made to some of the more important operations which are performed on the abdomen, but there are many others which have attracted attention in recent times which I will at least mention. Splenectomy, an old operation, has been revived since 1849 with greater prospects of success when performed with modern appliances and care. The pylorus, which

was first excised by Péan in 1879, has now been frequently excised and dilated by Bilroth and others; while various substitutes for pylorotomy, such as gastro-enterostomy (first performed by Woelfler in 1881); duodenotomy and jejunostomy have been put in practice. Colectomy, cholecystectomy, and cholecystotomy are also available operations, and many other proceedings have been attempted with more or less success. Complete excision of the rectum is still on its trial. It, too, dates only from 1838. My own experience of it shows that it is both easy and safe as an operation, but is of little abiding benefit. Laparotomy, now so frequently had recourse to, is justifiably employed even for exploratory purposes. After all penetrating wounds, or even after injury without a wound where there is reason to fear that bleeding or extravasation has taken place, opening the abdomen, securing the aperture by suture, and cleansing and draining the cavity is the recognized practice since Gross suggested it in 1842. In intestinal obstruction and all forms of peritonitis, laparotomy is now the rule.

In no department of surgery has better work been done in our time than in that of hernia. Here the influence of antiseptic surgery has been very apparent, as it has emboldened surgeons to attempt the permanent cure of rupture in a more complete way than could be achieved formerly,—the sac, in whole or in part, being employed to plug the internal ring, where it is secured either within or without the abdominal cavity, and supported by bringing together the pillars with catgut or wire. Such practice provides a more permanent and reliable barrier to the descent of the bowel than the unstable products of inflammation. I have myself obtained the best results when metal sutures were left in the tissues. In working out the radical cure of some forms of hernia and in other directions of practical surgery, my colleague, Professor George Buchanan, has much distinguished himself. Astringent

or irritating injections, as the alcoholic extract of white oak bark, used by Heaton and Warren, or the alum of Velpeau, iodine, etc., have claimed some attention. Mere invagination of tissue, or the introduction of foreign bodies as Belma's gelatine; Gerdy's skin of the scrotum; Wutzer's cylinder; caustics; setons, etc., have disappeared for ever. Chloroform and occasionally the use of the aspirator and inversion, have made a larger number of herniæ amenable to the taxis. There is less hesitation about early operation, and a permanent cure is now usually secured after herniotomy. The sum of all this means a great and notable improvement.

Many other points of practice, too numerous to be recorded, have been amended in recent times, as the conservative treatment of injuries of the hand, the management of scrofulous masses by excision, scraping and the electro-cautery, and the discriminate use of caustics and the proper field for the various forms of cautery, whether actual, or gas and electric.

The galvano-cautery was first used in England by Professor Marshall in 1850, but to Middeldorff, of Breslau, we chiefly owe its systematic use in a large variety of surgical cases, where its rapid action, manageability, and the very light which it emits can be utilized. It can never, however, replace the knife for the mere division of structures, nor the actual cautery for counter-irritation in chronic inflammation.

Electricity has made great advances as a practical agent since 1872. In experimental physiology, and as a diagnostic and curative agent, Erb's recent work will do much to promote its more precise use. To Duchenne (1855) must, however, belong the credit of having first recognized its importance; and it is probable that, with the aid of improved batteries and the modern "accumulator," better work will be done in the near future.

Among the many ingenious and useful instruments for clinical research and demon-

stration, the ophthalmoscope stands pre-eminent. Foreshadowed by Babbage in 1847, its present important position in ophthalmic surgery is due to Von Helmholtz, who took it up in 1851, and with Ruete who perfected it as a clinical instrument. To it we owe a knowledge of the pathology of the deeper structures of the eye, and the suggestion of various operations which have proved of the greatest service. The introduction of cocaine, since 1884, as a local anæsthetic, has added largely to the progress of ophthalmic surgery. The otoscope, the laryngoscope, and other similar instruments naturally followed on the construction of the ophthalmoscope, and have been fruitful of good in their respective departments. The sphygmograph, made practically useful by Marey in 1860, realizing the idea of Hales (1748), and of Herisson's sphygmometer, has largely aided the diagnosis of many conditions of the circulatory system, and by its pictorial tracings secures permanent records of their variations. The sphygmophone, which professes to render the arterial sounds audible, is still of no practical use. The endoscope, which was much improved by Desormeaux, after 1853, has never attained a practical position from the difficulty of using it, and the limited field to which it can be applied. Recently, however, Leiter, by using the smallest Edison lamp, and improving the construction, portability, and cost, has provided an endoscope which may possibly promote its employment. It is capable of being applied to all the passages and cavities which are accessible from the surface. As yet the splanchnoscope, which, it was hoped, would enable the abdominal cavity, to be illuminated by the electric light, has not come to practical application.

The thermometer, first used in medicine by Boerhaave and his pupil, De Haën, has become one of the most important clinical guides in consequence of the researches of Traube (1850), Wunderlich, and Zimmerman. I need hardly say that now not a few

ailments can be recognized and complications anticipated by its employment, and that both prognosis and treatment are essentially promoted by its use. Even brain affections are asserted by Voison of the Saltpêtrière to be recognizable by its readings. The aspirator, which was perfected in 1855 by Dieulafoy, is much valued for diagnostic and curative purposes. The *écraseur* of Chassaignac (1850), though received at first with ridicule like many other innovations, is beyond doubt, an admirable instrument in dividing vascular structures. The hypodermic syringe, introduced by Dr. Alexander Wood of Edinburgh, is highly valued as supplying us with a more rapid, easy, certain and manageable means of administering many drugs.

The beautiful discovery of skin-grafting by Reverdin, in 1869, provides us with a valuable resource in many difficult cases of delayed repair and deformity. The permanence of such grafts is not, however, as yet fully assured. The transplantation of perosteum, muscle, bone, nerve and even eye tissues has also been achieved of late years under the magic shield of aseptic surgery. Hydrophobia promises to be deprived of its terrors. Extensive burns are no longer dangerous when kept free from pollution, as the intestinal lesions which Curling drew attention to (1842), are now known to be due to septic poisoning. Nerves are stretched, with or without previous exposure, to the relief of many complaints; nay more, divided nerves and tendons also are successfully united by suture. Thermal, chemical, and sea baths have their appropriate domain assigned them. Cod-liver oil and many concentrated foods, easy of assimilation and rendered more so by the addition of digestives, have come into use. Patients are no longer reduced by diet, purging, and bleeding, or blindly over-stimulated with alcohol, but a dietary founded upon their requirements is prescribed before and after operation. The therapeutic advantages of change of scene and climate are fully taken

advantage of, as the means of locomotion have been improved and cheapened. Of the innumerable new drugs with which chemistry has endowed us many highly valuable ones have come into general use, while greater concentration and more elegance have been employed in their manufacture. The surgical instrument maker has, by his ingenuity and skill, simplified and improved the surgical armamentarium, and for every purpose has supplemented our manual dexterity.

Last, but not least, sanitation, that great achievement of our nation, has not only rendered more comfortable the lives of our people, but has, in an incredible manner, saved thousands from an untimely grave. In its official and active form it dates only from 1838. Compulsory registration has also introduced order into our records, and amazingly increased the national welfare. In war, too, as the records of the more recent European contests amply show, improved hygiene and the better management of the wounded, notwithstanding the greater rapidity of the manœuvres of modern war, and the vastly more destructive nature of projectiles, have accomplished marvels. The medical reports of our army and naval surgeons, and those most valuable records of the American army, are models of information upon such subjects. The Geneva Convention of 1864 and the International Red Cross Association, to which it gave origin, have brought unspeakable amelioration to the horrors of war.

The extraordinarily extended literature of our profession, which in every language makes known the researches of medical men throughout the world, has found expression in Hirsch's great work on the geographical distribution of disease. The International Congresses which have brought men together from every clime to compare their experience have proved how cosmopolitan is our science, though to us the words of Scripture may be fitly applied, that we are "ever learning, and yet never able

to come to a full knowledge of the truth." The remarkable subdivision of subjects which has been necessitated by the expansion of every department; the substitution of laboratory for systematic teaching; the use of statistics for generalizing experience, are all striking features in modern medical education.

Every collateral science has been made subservient to our purposes. Even the beautiful art of photography, which has been created since the Queen ascended the throne, has been employed, with remarkable advantages, for the record of our labors.

The General Council of Medical Education has been created to govern and direct our organization, and its influence is already felt and valued. But I must make an end.

Gentlemen, I have thus, in the limited time at my disposal, and to the best of my power, noted the changes and improvements in surgical theory and practice which have emerged during the last half century. The task I set myself has proved longer and more difficult than I anticipated, as the harvest has been extraordinarily abundant. I am conscious of having omitted much from want of time and knowledge; but I trust I have succeeded in showing that in every branch of the surgical art there has been a wondrous advance, and that the profession to which we belong marches in the very van of the great army, recruited in all climes, whose aim it is to enlarge human knowledge. Such a retrospect as I have attempted makes us reverence a profession whose hope and ambition it has ever been to abate suffering without distinction of race or creed. We see how an abiding and ever increasing purpose has run through these long ages, and that while we now rejoice at being no longer bound by the authority and crude doctrines which shackled our forefathers, we can yet honour the traditions of the past, and appreciate the efforts of that great host of devoted men who have, by their unselfish labours built up the famous temple of our art.

EYE, EAR AND THROAT.

NASAL

CATARRH.

BY

J. COOPERIDER,

M. D.,

OF MADISON.

Read to the Mitchell Dis-
trict Medical Society, at
French Lick Springs,
Ind., June 22,
1888.

We find catarrhal troubles existing to a very great extent in a variable climate like ours; and especially one in which there is great and sudden variations in the temperature, and one in which the humidity

also varies very greatly in a short time, thereby causing congestions of the mucus membrane lining the air passages.

2. The almost universal habit among our people of breathing through the mouth both asleep and awake.

3. Microscopic infusora, such as (asthmatas celearis), thus fastening itself upon the mucus membrane of the air passages, and by its irritant action, causing severe congestions of the mucus membrane lining the air passages.

It is presumably a disease of civilized life.

4. Living in overheated rooms during cold weather, with the air very dry, so there is a greater demand than natural to humidize the air as it passes into the lungs.

5. Also passing suddenly from an overheated room into the air with the thermometer often below *zero*; in fact, going from one extreme of temperature to the other suddenly with the air very dry, for we very seldom see any artificial means employed to humidize the air of our living rooms during cold weather.

6. The carpet nuisance. The above are some of the prominent causes of this *malady*, and from the above statement of causes it will be very apparent what will be the proper course for us to pursue in the prevention of the *malady* when we can find the cause, but it is not always so easy to ascertain the cause in each particular case.

The climatic causes can be prevented by removing to a climate where the air is mild and where the temperature is not variable,

and one in which the thermometer never rises above 75° or falls below 45° F, but if we cannot enjoy such a climate for ourselves and for our patient, we must supply the want as best we may by not getting into extremes of temperature and avoiding dusty air. We should advise our patients to breathe always through the nose so the atmosphere may become charged with moisture, and that it may carry away the mucus and the the various exhalations from the nasal *air passages*.

The microscopical infusoria is one of the frequent causes of influenza and the consequent congestion of the mucus membrane, oft repeated as a consequence, causes one of the varieties of chronic nasal catarrh, and to prevent this class of causes we should spray the nostrils with disinfectants and bacteriacides.

We should never overheat our rooms, but keep the thermometer ranging from 45° to 70°, and make provision for an ample supply of moisture at all times so that the air will make but a small demand upon the nasal mucus membrane for moisture, and if it is necessary to pass from a warm room to the cold air of out-doors, we should do it gradually or cover our noses with a respirator or handkerchief until the air passages become accommodated to the change. Alcoholic beverages of all kinds should be interdicted, as it is a well known fact that the use of alcohol enlarges to a great degree the capillary vesicles of the nose, throat and face. So also should all the various condiments and spices be forbidden, as they invariably cause a congestion of the mucus membrane to which they are applied.

Treatment.—As we have anticipated so largely our treatment in our remarks on prophylaxis, we may now waive all preliminary remarks and proceed at once with our thoughts on the medical and surgical treatment of the disease in hand.

In the preliminary stage known as coryza or a common cold, we should attempt to cut it short, so as to relieve the mucus mem-

brane as much as possible of the congestion, and restore it to its normal condition, and we can accomplish it by various means, such as a hot bath for the feet and drinking warm carminative teas, such as mintbalm, and even capsicum, but the most efficient means is to eat nothing but crackers and drink a small bit of tea, or a bit of toast and tea, and administer a saline cathartic, or a small dose of calomel followed in a few hours with a Seidlitz powder.

But the most satisfactory is to snuff up each nostril until the patient tastes it a small quantity at a time, at short intervals, of the following :

R Quininæ sulph gr. v.
Iodoformi gr. ij.

Sig: Use as a snuff every two or three hours. But as we very seldom see the case until it has assumed its sub-acute or chronic form, and even then it is most likely to have assumed its most obstinate and serious form before the case is brought to our notice, we should at once assume active measures by correcting the secretions by free doses of *calomel* and *ipécac et opii. pulv.*, followed by a saline cathartic, and when we get the alimentary canal well cleared, and the secretions well established, we should put our patient upon a diet of bread and milk, with vegetables, and as a local application some of the vegetable astringents, e. g. *glycerinum acidi galici* by means of pledgets of absorbent cotton two or three times a day, or as some prefer the spray; or the following as a snuff every two or three hours :

R Acidi Tannici gr. v.
Iodoformi. gr. ij.

Sig: Use as a snuff. All the vegetable astringents are admissible in this case, and some of the mineral, as *zinc. sulph.*, *cu. sulph.*, etc., but the best is *argenteum nit.* 30-40 grain to the \mathfrak{z} , making the application with glass, brush, or a pledget of absorbent cotton once in two or three days. These are the more applicable in the chronic cases.

Where the nares are dry and full of crusts, the spray of the following is excellent :

Fd. ext. quillaiaie
Fd. ext. eucalypti. aaf \mathfrak{z} ss.
Glycerini and aquæ dest . . . aaf \mathfrak{z} j.

Sig: One teaspoonful to \mathfrak{z} of water ; use with a spray twice a day in each nostril until the crusts are all loosened and come away. Some prefer Dobell's solution, which is as follows :

R Sodii boratis
Sodii bi-carb aa \mathfrak{z} j.
Acidi carbol \mathfrak{z} ss.
Glycerini f \mathfrak{z} j.
Aquæ font O. ijm.
Ft. solutio

Sig: Use as the other with a spray.

After the crusts are cleared away the following is excellent :

Hydrastis \mathfrak{z} ij.
Glycerini \mathfrak{z} ss.
Aquæ font gr. to make f \mathfrak{z} iv.

Sig: Each nostril to be well sprayed twice a day. If the nostril should be inclined to very free secretion the following is excellent : Quinia sulph. gr. x iodoform, gr. v mx. Use as a snuff three or four times a day until the patient tastes the bitter; or Boulton's solution used with a spray.

In those cases in which there is dryness of the mucous membrane in the nostrils, and a thick glairy mucous discharge from the vault of the pharynx, the topical application of iodine to the post-nasal cavity is of great benefit in stimulating the serous glands and making the secretions more watery; besides it has the effect of diminishing the hypersensitiveness of the palate, so that after a few applications a rhinoscopic view can be obtained, which, before was impossible.

The application can be made through the mouth or along the floor of the nostril, in either case by means of a tuft of absorbent cotton fastened to the applicator bent to the right angle.

When the application is made through the mouth great care must be exercised to prevent the iodine from entering the larynx by running down along the post-terior wall of the pharynx, for if it does it almost always causes severe laryngeal spasm.

Three solutions of the following strength will be found to answer in most cases :

No. 1 R Iodini resub. . . . gr. viij.
Potassii iodidi gr. xxxviij.
Glycerini gr. f3vjss.

No. 2 R Iodini resub. . . . gr. xij.
Potassii iod. gr. 3i.
Glycerini f3vjss.

No. 3 R Iodini resub. . . . gr. xv.
Potassii iod. gr. lxxv.
Glycerini f3vjss.

Apply No. 1 until the patient ceases to feel any sensation ; a few minutes afterward No. 2 should then be used, and when it loses its power to irritate, No. 3 should be used ; but it is not often needed.

There are a number of drugs when taken internally act upon the mucous membrane of the nasal cavity, and thus aid the local application in their curative action.

Among them are the iodide of potass. in small doses combined with bromide, fluid extract grindelia, robusta, iodoform, crude petroleum, etc.

Tonics, fresh air, regulation of diet, and hygienic surroundings, remove all carpets, let the patient live on waxed and polished floor, and study to remove all exciting causes of the trouble.

The surgical treatment will call for the removal of all obstacles to the free entrance of air into the nasal cavities.

Hypertrophies can be removed by the application of caustics as nitric, chromic or acetic acid (glacial) ; or preferably the galvanic cautery, but the best laryngoscopists of to-day almost invariably discard caustic application in any form to the mucous membrane of the nose and throat, but if milder means fail the galvanic cautery is the only safe and successful application.

Polypus can be removed with the wire or catgut sware.

I have now given you an outline of the treatment of that most common of all complaints, the disease of civilized life, nasal catarrh.

DISTINCT AND INDISTINCT VISION.

BY

JAMES JURIN,

LONDON.

An appendix to "a complete system of opticks,"
by Robert Smith,
L.L. D., Professor of

Astronomy and Experimental Philosophy, at
Cambridge, and
Master of
Mechanicks to his
MAJESTY,"
Cambridge, 1738.

Continued from August
Progress, Page 64.

80. If the *radius of dissipation* be equal to half the breadth of the *true image*, the *false image* will degenerate into the right line ac , Fig. 39.

81. If the *radius of dissipation* exceed half the breadth of the *true image*, there will be no *faint false image* equally luminous in all parts, as in the case of the circular object, Art. 24, but

the whole image of the rectangle will be one *penumbra*, strongest in the middle, and decreasing gradually in light on both sides towards the outer edge.

For in Fig. 40, the point e , situated in the middle of the breadth of the rectangle, receives light from every point in its *circle of dissipation*, except the two segments fg , and hi . The measure of its light, therefore, is the space $fg hi$.

The measure of the light thrown upon the point k , situated more towards the edge than the point e , is the space $lm on$, less than $fg hi$, as is easy to perceive.

The measure of the light thrown upon the point p , still more outwardly situated than the point k , is the space or segment $rq s$, less than $lm on$.

And the measure of the light thrown upon the point t , situated in the very edge of the *true image*, is the segment or semi-circle vw , still less than $rq s$.

Therefore the light of the whole appearance will decrease from the middle both ways breadthwise.

Towards the ends of the *true image* AB and CD , the *penumbra* will decrease lengthwise also. For the point x , in the line AC , whose distance from A is $x A$ equal to the *radius of dissipation*, will be illuminated by the semi-circle Axy ; but the points be-

tween x and A , will be illuminated by less than a semi-circle, and the point A will be illuminated only by a quadrant, and any point of the *penumbra* beyond A in the line $x A$ produced, will be illuminated by less than a quadrant. Therefore the ends of the *penumbra* about $A B$ and $C D$ will be weaker than the other parts.

82. If the *radius of dissipation* exceed the breadth of the *true image*, the *penumbra* will be fainter in proportion to that excess, but still the middle will be the strongest, and the light will decrease from the middle towards the outer extremity, as is manifest from the consideration of Fig. 41.

83. When the *radius of dissipation* is very large in proportion to the breadth of the *true image*, the *penumbra* will be very faint, but will decrease very slowly and almost insensibly, except very near the outer edge.

For in Fig. 41, let us imagine the two sides of the *true image*, $A C$ and $B D$, to approach very near together, and then it is plain that the several portions of equal circles, $f g i h$, $l m o n$, $q r s t$, and $y z$, whereby the points e , k , p , and x are respectively illuminated, will decrease very slowly in respect to the distances of the points k , p and x , from the middle of the image.

84. Very near the edge the *penumbra* will decrease very fast.

For in Fig. 42, the light thrown upon the point e very near the edge of the *penumbra* will be measured by the segment $f g$, and the light thrown upon the point h a little nearer that edge, will be measured by the segment $i k$. But the segment $i k$ is much less than the segment $f g$.

85. That part of the *penumbra* near its edge, where the light decreases very fast, is nearly equal to the breadth of the *true image*. This easily appears from the consideration of Fig. 42. For if the point e were distant from the line $G F$ by just the line of $C D$, its *circle of dissipation* would touch the line $A C$; and by removing the point e more outwards, its segment of light $f g$ would decrease very fast.

86. When the *radius of dissipation* is vastly great in proportion to the breadth of the *true image*, that part near the edge where the *penumbra* decreases very fast will be insensible, and the whole *penumbra* will decrease insensibly in light from the middle towards the outer edge.

87. A narrow line, as a stroke in this print, when seen very near, will appear very broad and faint, and almost equally faint throughout the whole breadth. This follows from Art. 83, 84, 85, 86.

88. Two narrow parallel lines drawn near to each other, when viewed very near, may put on the appearance of one line, with a *penumbra* on each side of it. The two lines A , Fig. 43, may, by viewing them very near, appear as B .

For, by Art. 87, each of these lines must appear as one broad faint line, and being near together their *penumbrae* will meet in the middle, and the part where they meet must appear nearly of a double strength.

89. Two narrow lines meeting in a small angle, when seen very near, may form the appearance of an inverted wedge surrounded with a *penumbra*.

The two lines C in Fig. 44, may appear as D , when viewed very near.

This is easily proved in the same manner with Art. 88.

90. A circle upon white paper, bounded by a narrow black line as its circumference, when viewed very near, will appear less than if it were seen distinctly: but the narrow line that encompasses it, will appear broad and faint, and will be stronger on the inner or concave side, than on the outer or convex side; and the whole breadth of the faint appearance, or *penumbra*, will be equal to twice the *radius of dissipation*, added to the breadth of the circular line. That is, instead of the appearance A , Fig. 45, we shall have the appearance B .

(TO BE CONTINUED.)

OBSTETRICS AND GYNÆCOLOGY.

PLACENTA PREVIA.	I am induced to make a report of this case to the society, not because I have any- thing new to present in its management, but because of its infre- quency, and the great mortality resulting
BY H. M. SMITH, M. D., OF VINCENN ES. Read to the Mitchell Dis- trict Medical Society at French Lick Springs, Ind., June 22d, 1888.	

from the accident. Nor will I enter into a discussion of its etiology, or reiterate the views pro and con in relation to its treatment by many distinguished members of the profession. But what I have to say will be brief and practical.

That the accident is rare statistics clearly show, and that great fatality attends it, is equally certain. In an experience of more than forty years' general practice, during which time I accomplished about 2,000 deliveries, this is the only one met with in my own practice, where the placenta wholly occupied the canal of the cervix, and seemed to be centrally located. When a novice to some degree in the profession, I was summoned as a consultant in a similar case to this. Four elderly physicians were present, and styptics, the tampon, ice, etc., had been tried in vain and an alarming hemorrhage continued. I advised version and immediate delivery. The suggestion was not acceded to by my elders, and I retired, and the woman died undelivered and exsanguinous. This was clearly a case amenable to the skill of the obstetrician.

The case under consideration came into my hands suddenly and unexpectedly, I having been called to it without previous knowledge of its character.

On July 23, 1887, at 9 P.M., I was summoned in haste to see Mrs. T. multipara, aged about twenty-five, a well developed woman. When I entered her department, I was informed by a female attendant that the patient was in labor and flooding profusely. I then learned that she had had

many floodings during the previous two or three months, and had been under the care of a young member of the profession, and whom the family expected to be with her at her confinement, but becoming alarmed, he was abandoned for one whom they thought possessed more experience. An examination revealed the serious character of the case and the profuseness of the hemorrhage admonished that no time was to be lost in bringing relief. The os was well dilated, and I think her full period of gestation completed. Administering a fluid drachm of the extract of secale, I dispatched a messenger for my partner, Dr. F. M. Harris. Not following the plan of Prof. Simpson and other eminent writers in attempting the detachment of the placenta, I forced my fingers through the body of the mass presenting, carried my hand up, seized a foot and brought it down through the opening made, and through the vulva. By this time Dr. H. arrived and with his valuable assistance, after a severe and we thought almost fatal traction to the child, we had the satisfaction of delivering it alive, although limp and apparently lifeless, but it rallied under chafings, hot applications and artificial respiration. Another dose of ergot was administered with a stimulant to the mother when the placenta was speedily extracted and the uterus grasped and held for a few moments until firm contraction followed and flooding ceased. Although success was thus far attained, I felt much concern as to the future of the mother and offspring, for the former was quite exhausted with possible danger ahead of septic disease, and the latter apparently seriously injured from severe strain in its delivery. On the morning of the 29th, I found the mother and child "doing as well as could be expected," having rested fairly well through the night, with no alarming symptom developed. Her pulse was 110. Temperature 100. Washed uterus out with a weak solution of carbolic acid and hot water. Ordered whisky as a stimulant with light nutritious diet, and that she be kept

quiet, and allowed cooling drinks. Evening temperature 101, pulse 112, although she had rested well. Not to extend this report further, I will say the pulse nor temperature ever exceeded the figures named, although there was a persistence of high temperature and fast pulse up to the time of her discharge, when the pulse counted 103 and the temperature registered 99, at which time the general condition of her system seemed otherwise normal, spirits and appetite good. The treatment throughout was supporting with the disinfectant washes locally applied twice daily. The child had fever for several days, and symptoms were present indicating the shock the nervous system had sustained during the severe traction incident to its delivery, but it made a good and complete recovery.

The objections urged against the procedure followed are: First, of the difficulty in penetrating the placenta; secondly, the laceration of the child; and thirdly, the greater mortality attending version under such circumstances. The two first objections I found untenable, and the third I think will not be found true when fairly considered. The statistics brought forward to sustain the latter objection include spontaneous as well as artificial separations of the placenta. The natural separation of the placenta is incident to the vigorous action of the uterus, when speedy delivery spontaneously occurs. In such cases a greater per cent. of recoveries of the mother occurs and a like saving of the lives of the children. But because nature brings about a complete separation of the placenta before expelling the child, it must not be taken as a criterion by the obstetrician. When nature performs her work it is usually well done, but it is when she is inadequate to meet the exigencies of the occasion, that the physician is called upon to act. To wholly separate the placenta, before at least the conditions are propitious for a speedy delivery, the chief factor being a vigorously contracting organ, is but to bring destruction at least to the child, and in many

cases to the mother. The question then arises, is it as safe to the mother and safer to the child to let the placenta remain in situ except so far as it may be in the way of a vertex delivery, until that act is accomplished? Reason would seem to give an affirmative answer.

But in contemplating a case of this kind one objection might be urged, and that is the increased danger of a laceration of the os, if detached portions of the placenta descended with the head. But would not the good that follows, by the pressure of the child on the bleeding vessels of the placenta, more than compensate for the necessarily decreased diameter of the outlet since the parts are yielding and the safety of the child is assured while the plugging process exists?

The only point worthy to be noticed further, following the delivery in this case, is that of the increased frequency of the pulse and the increased temperature of the body, in the absence of inflammatory action; these conditions being abnormal, until convalescence was fully established.

MISSISSIPPI
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MEDICAL
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The regular annual session will be held in Pickwick Theatre, Jefferson and Third Avenues, St. Louis, September 25, 26 and 27, 1888. The programme is perfected, and the entire time of the meetings from 9:30 A. M. to 5:30 P. M., each day, will be taken up with strong papers, and full and free discussions, there being no extraordinary or irrelevant business, such matters being settled by committees, without discussion. The three evenings will be consumed by private and public entertainments, every delegate may be assured that constant efforts will be made for his comfort and enjoyment.

All applications for membership shall be referred to the Committee on Credentials. The annual dues \$3.00 shall be payable in advance.

I. N. LOVE, M. D.,
Chairman Committee Arrangements, Lindell and Grand Avenues, St. Louis.

PATHOLOGY AND HYGIENE.

ÆTIOLOGY OF
PUERPERAL
FEVER.

BY

JAMES P. MARSH,

M. D.

GREEN ISLAND, N. Y.

N. Y. Medical Journal.

QUESTION FIRST:

"What evidence can be adduced to show that the puerperal fevers are caused, either directly or indirectly, by micro-organisms?"

In arising to reply to this question, I feel

it incumbent upon me to turn my attention to the term puerperal fevers. Professor Parvin defines puerperal fever as "an acute febrile affection, heterogenetic, contagious, and often epidemic, attacking women in child-bed." I am well aware that it is not politic for a disputant to preface his remarks with a string of objections, but nevertheless, I feel constrained to take exceptions to the term puerperal fever, and also to this definition of the condition commonly known as "puerperal fever." These objections are based upon the ground that the pyrexia of the disease is only a symptom of secondary importance, and, as pathologists are very well agreed that in inflammatory affections the initial lesion is a lymphangitis¹, it is therefore suggested that the condition might properly be called obstetric lymphangitis; but to declare it "heterogenetic" is to affirm that which is by no means conceded to have been proved. I submit that a definition must convey to an inquirer that which is understood by the majority of competent persons when the said term is used. Hence by puerperal fever we shall understand a lymphangitis contagious, often epidemic, which attacks women in childbed.

Returning to the proposed question, it is to be observed that it has been framed in a peculiar manner, and that the use of the plural number carries with it the direct admission of there being more than one puer-

peral fever. Should any one of my hearers, therefore, take the ground that there is a puerperal fever *sui generis*, then also must they admit that the lying-in woman is subject to all the grades and forms of pyæmia and septicæmia.²

Having thus performed the duty imposed upon every discussor of first accurately defining his subject, we find that the inquiry as regards the cause or causes of this disease must embrace, at least, three several factors:

1. As regards the manner in which the state of pregnancy might influence the condition of the maternal organism in those respects which may relate to either its receptivity or refractoriness toward micro-organisms.

2. As regards the natural history of micro-organisms, so far as the lying-in woman would furnish a suitable nidus for their birth, growth and decay.

3. As regards the favorable or the unfavorable environment of both the woman and the micro-organisms.

Now, it is purposed to briefly set down under each one of these divisions the well known and established facts which may relate to that part of the subject, but before I proceed to do so let me detain you for a moment by a consideration of the broad rules of evidence according to which the inquiry must be conducted.

If evidence of the unfailing presence of micro-organisms of a certain definite morphological character in the lochia or tissues of patients suffering from puerperal fever can be adduced, and, furthermore, that said organisms are found in no other disease, or, on the other hand, in cognate diseases, it is still maintained that it is not proved that these micro-organisms are the direct or only cause of said "fever." It is self-evident that they must be either complete or partial cause—complete or partial effect, which relation may be in either case direct or in-

1. Arpad G. Gerster, "The Rules of Aseptic and Antiseptic Surgery," New York, 1888, p. 179 *et seq*, especially Note I, p. 183.

2. Fordyce Barker, "The Puerperal Diseases," New York, 1874, pp. 476 and 477.

direct. To establish sufficient proof, it must be incontestably shown that these organisms, alone and without the chemical products of their existence in a previous environment, will originate "puerperal fever" in a patient who has nothing in her previous or present condition, other than being in childbed, which would render her either susceptible or refractory to said micro-organisms. Supposing that this can be demonstrated, then, in addition, to render the proof conclusive, it must be established that the condition known as puerperal fever never arises without the presence of these organisms. If proof of the foregoing propositions be sound, it is still necessary to declare by facts whether these organisms are the direct poisoners or that the products of their existence—the *débris*—are the real producers of the disease.

So difficult is it to eliminate all sources of error in investigations as to the ætiology of puerperal fever that it is not surprising that of the many theories which have been proposed, few have advanced much farther than the stage of an hypothesis. The mind of man is of an inquiring tendency, but his investigations into the causes of things have in the past been very discouraging; he has usually solved one problem by leaving two conundrums in place of it. This has been pre-eminently true of the ætiology of puerperal fever, and there is but one way through the labyrinth of its vast literature. Place on your right hand all the known facts, on your left all the proposed theories; walk boldly midway between the two—never confounding the one with the other—and you may, after many hours of hard toil, arrive at the faint glimmering twilight of the conception of the ultimate cause, but the clear sunshine of the exact relation of cause and effect has never been, nor never can be, a concept of the human mind. Hence I am led to say with Sir William Aitken³, that, after centuries of toil and

study, the final cause or causes of any diseases are still absolutely unknown. Having then told you that it is impossible to solve the riddle that we have in hand, and yet inconsistently following hope, the one great chimera of mankind, we proceed to those facts which may be said to have been definitely settled.

I think it well established that during pregnancy there occurs a marked diminution of the red blood-corpuscles;⁴ that the function of these corpuscles is mainly that of carriers of oxygen;⁵ that the vitality of the individual cells composing the body is seriously impaired, if they do not receive a sufficient supply of oxygen;⁶ that there is during pregnancy an increase in the watery constituents of the blood, and that, as a consequence of this hydræmia and by reason of the pressure of the gravid uterus upon the abdominal veins, there is often induced an œdema which by preference manifests itself in the lower extremities, and frequently extends to the labia, vagina, and the lower segment of the uterus;⁷ and that where an œdema arises from mechanical pressure there also ensues a retardation in the rapidity of the blood-current and an increase in the blood-pressure.⁸

In the lochia of nearly every healthy woman there exist micro-organisms of different varieties.⁹ Pasteur has divided micro-organisms into two classes. The first consists of those whose existence is jeopardized in an environment deprived of free oxygen; the second contains those whose existence is jeopardized in an environment where there is present free oxygen. The first class he calls *aérobies*—oxygen-living; the

4. William T. Lusk, "The Science and Art of Midwifery," New York, 1883, p. 92.

5. John C. Dalton, "A Treatise on Human Physiology," New York, 1882, p. 219.

6. *Ibid.*, p. 232.

7. P. Cazeaux, "A Theoretical and Practical Treatise on Midwifery. Annotated by S. Tarnier," Philadelphia, 1873, p. 479 *et seq.*

8. Austin Flint, "A Treatise on the Principles and Practice of Medicine," Philadelphia, 1881, p. 35.

9. A. Charpentier, "Cyclopedia of Obstetrics and Gynecology," edited by Grandin, vol. iv, p. 302.

3. Sir William Aitken, "On the Animal Alkaloids," Philadelphia, 1887, preface, p. v.

second, *anaërobies* — non-oxygen-living.¹⁰ Both of these classes are represented in the micro-organisms found in the discharges and tissues of healthy and unhealthy puerperal women. The prevailing organism, however, both in the healthy and the unhealthy, is a micrococcus, which is very abundant in women who are passing through or are about to enter upon the state of puerperal fever.¹¹ These micrococci belong to the vegetable kingdom, and, as regards their structure and reproduction, are the most simple of living beings.¹² They multiply by *spontaneous fission*, and sometimes this division is not complete, and it is one of these forms which constitutes the chain-micrococcus.¹³ Now, it is this chain-like micrococcus that appears to have the most direct relation to puerperal fever, and to also it has, so far as microscopic evidence is concerned, been found in erysipelas, diphtheria, and scarlatina.¹⁴ When the chain-micrococcus has gained admittance to a wound, it especially selects the lymphatics for its seat of action and rapidly extends along these vessels and the lymph-spaces.¹⁵ It may be truthfully affirmed that there is no more favorable ground for this organism than the wounded lymphatic system of the living mammal.

We have all heard puerperal fever called puerperal septicæmia,¹⁶ and many of us have thought with justice. Now, in septicæmia there is present a true bacillus, and it is, perhaps, the very best example of the anærobic bacteria.¹⁷ This bacterium is also the leading member of the class which begins the process of putrefaction.¹⁸ It is

found in the lower part of the intestines, where there is no free oxygen,¹⁹ and its malignity seems to consist in its wonderful power of reproduction. Its growth is attended by very noxious odors, for it liberates the sulphur and phosphorous gases from the tissues. It is found wherever dead albuminoid substances are undergoing decomposition. It is very numerous in cadavers, making its appearance a few hours after death.

The almost unfailing existence of large quantities of these two micro-organisms—the chain-like micrococcus and the septic bacillus—in the discharges of women suffering from puerperal fever has been conclusively proved, but whether they are the cause or effect is still *sub judice*. Hausmann, of Berlin, observed that septic symptoms followed the injection of septic material into the uterus of a pregnant rabbit.²⁰ An excited experimenter might here see the cause of septicæmia, but the philosophic biologist would remember that there has been inoculated not only the living organisms, but also the chemical results—the *débris*—of their existence in a previous environment. If we separate from each other the bacteria and the fluids in which they have lived, the results with either are negative.²¹

At this stage in our inquiry perhaps it would be well to turn our attention to the vexed question of ptomaines. When I use the word ptomaines I mean the alkaloid products of a purely chemical process which, without the intervention of micro-organisms, is asserted to arise in dead animal tissue.²² These alkaloids are said to exert an action upon the living organisms very similar to the physiological action of atro-

10. "Louis Pasteur," from the French, by Lady Claud Hamilton, New York, 1885, p. 53.

11. Charpentier, *loc. cit.*, p. 308.

12. George M. Sternberg, "Photomicrographs," Boston, 1884, p. 130.

13. *Ibid.*, p. 131.

14. From the conclusions of Lomer, Charpentier, *loc. cit.*, p. 313. See, also, Parvin, *loc. cit.*, p. 567.

15. Gerster, *loc. cit.*, p. 170.

16. W. S. Playfair, "A Treatise on the Science and Practice of Midwifery," Philadelphia, 1880, p. 589.

17. W. Watson Cheyne, "American Journal of the Medical Sciences," vol. 92, p. 80.

18. "Life of Pasteur," *loc. cit.*, p. 195.

19. *Ibid.*, p. 194.

20. Charpentier, *loc. cit.*, p. 299.

21. Hitler obtained negative results with bacteria washed in water, and hence we arrive at the law consistent to all organisms, that they live in a certain environment and perish in others, which are only slightly dissimilar. To substantiate this assertion, let me instance the action of the splenic-microbe upon the common fowl, where the successful inoculation depends upon a few degrees of temperature.

22. Aitken, *loc. cit.*, pp. 49, 50.

pine.²³ It is claimed by certain experimenters that these alkaloids are the originators of the class of diseases which we are discussing to-night.²⁴ Accept this position, gentlemen, and you may, reaching back over the expanse of two thousand years, clasp hands with the immortal Hippocrates. The march of centuries, then, has accomplished nothing; the old humoral pathology leads the van; the cycle of medical time has made its revolution, and we are again at the starting-point. Now, what I wish to say is that no chemical substance has been proved to have the power to originate out of its own environment a product which, as to its molecular formula, is identical with said substance. According to Brieger, it requires one thirteenth of a grain of mydaleine to kill a rabbit; the microbes on the point of Pasteur's needle will do the same. I am so bold to say that Brieger could not recover from the remains of said rabbit more mydaleine than would naturally be found therein, while Pasteur would harvest millions of microbes for every one planted. I put the whole subject in a nut-shell when I declare animal alkaloids to be unproductive and microbes to be reproductive. It is true that Brieger has found poisonous alkaloids in a dead body;²⁵ but this signifies nothing until he has proved that that given cadaver was not acted upon by micro-organisms previous to his analysis, or that the alkaloids are the direct food of the microbes, and are consequently pre-existent. Now, when a person receives a poisonous dose of atropine, there is no increase in the temperature;²⁶ therefore if an alkaloid like atropine is the cause of puerperal fever, there should be no pyrexia. As corollary to the foregoing propositions I may assert that, if any one doubts the power of microbes to produce a direct chemical change, I refer him to the proved fact that the or-

ganisms found in certain sulphur waters have the power of reducing the sulphates of said waters.²⁷

We now approach the facts as regards the third division of the subject, and upon these I shall dwell very briefly, as they are to be more fully considered by one of the subsequent speakers.

It is known that puerperal fever is more liable to follow a tedious labor than one of average severity; an instrumental rather than a non-instrumental; that tedious labor is frequently accompanied by extensive laceration of the cervix uteri; that the external wounds are the ones which usually become the seat of diphtheritic deposits; that the so-called diphtheritic deposits of the higher genital tract are in reality superficial sloughs; that retention of a portion of the placenta is more likely to be followed by puerperal fever than is complete expulsion of that body; that the lying-in woman, through the condition of her pelvic organs subsequent to delivery, offers, so far as temperature, moisture, the presence of appropriate microbial pabulum, a suitable environment for the growth of the aerobic micro-organisms, and that the *débris* of the growth of the aerobic organisms is a suitable food for the anaerobic bacteria.

Finally, then, having gone over ground in a fragmentary manner which would require volumes to fully elaborate, I must say that the cause or causes of puerperal fever are unknown, and, as has been observed by Grandin, it is not scientific to dogmatize while our knowledge is in so chaotic a form. The one great fact, as has been observed by Pasteur, is the unfailing evidence of the existence of micro-organisms, or of the results of their action.

Having thus delivered my judicial opinion, it may not be taken as presumptuous if I declare it to be my own personal conviction that micro-organisms are one of the main factors in the causation of this disease.

23. *Ibid.*, p. 38.

24. *Ibid.* pp. 49, 50.

25. *Ibid.*, p. 39.

26. T. Lauder Brunton, "Pharmacology, Therapeutics and Materia Medica," Philadelphia, 1881, p. 119.

27. E. L. Trousseau, "Microbes, Ferments, and Molds," New York, 1886, p. 119.

I do hold that the state of the puerperal woman as she comes to childbed is particularly hazardous. She offers an organism whose natural resources of defense are reduced in number and in strength; a circulation whose rapidity is lowered; an abundance of moisture; a propitious temperature; an exhausted mind and nervous system; a pelvic lymphatic system, laid open by lacerated wounds—a most fitting nidus for the in-dwelling of the chain-micrococcus; large blood-vessels peculiarly deprived of free oxygen, especially suited for the rapid advance of the anaerobic septic bacillus of septicæmia.

To me there is a clear mental picture of what I conceive to take place when a woman contracts puerperal fever. By reason of the above-mentioned condition of her blood and the character of her labor, she is especially prepared to receive into her genital apparatus²⁸ such microbes as may be conveyed to her upon the hands or instruments of her attendants. If, now, it be the septic bacillus, and the quantity large, and the inoculation direct into a blood-vessel, the result is a rapid fulminating case; it is a matter of a few hours. As you stand by the bedside of a woman thus inoculated, you may safely say that here is a direct inoculation of septic material, of a *contagium vivum*; that here the method of Semmelweiss²⁹ would have prevented the condition; here some one is guilty of manslaughter. Supposing, however, that the inoculation is done with the chain-micrococcus. After the stage of incubation, which is about three days, has passed, there appears usually upon the external genitals a diphtheritic patch, or perhaps there is no patch, but the lochia become ill-smelling. The micrococci, which now swarm in the discharges, having clustered themselves together in great masses and become attached to the mucous surface, thus

largely constituting the said diphtheritic patches, begin, from dearth of food-supply, to advance along the lymphatics.³⁰ Their path of advance is not by the blood-vessels, simply because the number of red blood-corpuscles, the carriers of oxygen, is reduced; and, on the other hand, here abound the white blood-corpuscles, which, as Sternberg has pointed out, are the natural antagonists of the microbes. Nevertheless, the leucocytes, which constitute the police system of the organism, advance in vast numbers to repel the attacks of the invading microbes. Countless numbers of leucocytes and microbes are killed, their dead bodies constituting what is called pus. Finally, the leucocytes, by means of the half-dead bodies of their comrades, build up a rampart in the ends of the blood-vessels and lymph-channels.³¹ The rest of the maternal organism is thus shut against the victorious host, and consequently its food-supply becomes limited. As the pabulum decreases, the adult microbes perish, but they are survived by innumerable spores. Should, now the process cease, the woman has a slight chill and a few degrees of pyrexia—it is the “milk fever” of the third and fourth days. But now the septic vibrio finds the conditions of his existence. The spores of this bacillus, free oxygen being absent, begin to develop. This bacillus feeds upon the bodies of the dead microbe and the dead leucocyte alike. His carnage gives origin to gases of putrefaction, which, as their volume increases, seek an egress. Pressure is brought to bear upon the ramparts of the leucocytes, eventually a weak spot is found, the leucocytes are pushed to one side, and a host of microbes, which have been dormant but not dead, are

30. Note II.—Nor is the general course of that advance a hap-hazard chance, for the observations of König and Schlesinger prove that the course of pelvic inflammation is along the lines of least resistance, and Gordon's post-mortems would show that that side which has been more functionally active is more liable to become affected.

31. Virchow has pointed out that a lymphatic thrombosis is a conservative process. William Leishman, “A System of Midwifery,” Philadelphia, 1879, p. 676.

28. Use of term according to Dr. John W. S. Gouley.

29. Joseph Kucher, “Puerperal Convalescence,” New York, 1886, p. 213 *et seq.*

hurled into blood-channels and lymph-spaces. The white blood-corpuscles rally; they grasp in their amœboid embrace the advancing host. Every leucocyte is an officer of the law; he takes a microbe prisoner and hurries off to the nearest lockup. If now the arrest has been made in a lymph-channel, he takes his capture to the nearest police station which is the nearest lymphatic gland or space; but if the seizure has been made in the blood-current the urgency being great, the microbe is hustled off to the great court of justice of the human organism—which is the kidney. Here the microbe is deposited. The kidney cell, which is at once judge and executioner, passes sentence, and the micrococcus, or what remains of it, is transported out of the body-politic. The maternal organism has proceeded with her public offenders, as England did a century ago. Still, at times, the number of criminals is so great that a riot takes place. A number of officers and judges—leucocytes and kidney cells—“bite the dust,” and we, observers, notice an albuminuria. Supposing, however, that the courageous leucocyte gets a hold on a septic bacillus, or rather a septic bacillus gets a hold on a leucocyte; the leucocyte makes an endeavor to reach the courts, but at some point in the journey the bacillus kills the leucocyte—*e. g.*, the officer is assassinated by his prisoner. A general fight takes place at this point between leucocytes and baccilli—the result eventually being a metastatic abscess. The bacilli again resort to their putrefactive gases—in other words, they use dynamite. The bacteria, by means of their atropine-like *débris* (alkaloids), paralyze the vaso-motor nerves. The blood-vessels become dilated. The circulation is slowed down. The police can not reach the central stations with their captures. The septic baccilli and the microbes carry the day. The *friction* of the fight carries up the general temperature of the patient. A fatty degeneration of the tissue-cells of the body takes place. The battle closes with the patient's life.

In every human organism the blood-vessels and lymph-channels constitute a great system of highways and byways. Along these crowded thoroughfares there whirl an innumerable host of red blood-corpuscles—the artisans of the body-politic. Meandering along down the sides of these “arteries of travel” stroll the leucocytes, officers of the law; like most policemen, proverbially slow-going, frequently coming to a stand-still when they are not hustled by the strong public opinion moving in the middle current. Nevertheless, they are the constituted protectors of the active little red blood-corpuscle. As they leisurely perambulate the wide avenues of the human republic they carefully examine every flaw in the perfect pavement, for by chance one of those general foes of the society, a micrococcus, may be attempting to push a way through or digging a pitfall to catch the foot of some unwary citizen. Should, however, the burly leucocyte find a septic bacillus, then he unearths a true anarchist. The result is a “Haymarket” riot.

A NEW STAR.

In the profession of Journalism men come and go, as in other professions. In medical journalism the ebb and flow is, perhaps, more marked than in any other branch of the profession.

It has often been stated that men never do well in entering a profession after forty. The rule must be modified. Professor Wm. H. Pancoast, the great surgeon and anatomist of Philadelphia, entering the profession as joint editor of the *Medical Register*, has exhibited already the sterling qualities of true journalistic talent. He began after forty, and has, undoubtedly, the Divine afflatus. PROGRESS salutes him with fraternal reverence, and bids him a joyous passage through the quagmires of envy and baseless assault, which beset the pathway of those who faithfully perform editorial service, and honestly and candidly express such views as the medical critic must in duty give utterance.

The editorial tone of the *Register*, always high, is now exalted, and its reviews are pithy and just.

BOOKS AND PERIODICALS.

THE SURGICAL
DISEASES OF
THE GENITO-
URINARY
ORGANS,
INCLUDING
SYPHILIS.

BY
E. L. KEYS,
A. M., M. D.,
Professor of Genito Urinary Surgery, Syphilology, and Dermatology in Bellevue Hospital Medical College, Consulting Surgeon to the Charity Hospital, etc.,
A revision of the Van Buren and Keys Text Book on the same subject.
D. Appleton & Co., New York.

Time and surgical advance have destroyed, in great part, the value of the original treatise upon which this revision is founded, making it an unsafe guide as a textbook upon certain subjects. To bring the book up to date, therefore, it became necessary to recast it entirely, and the publishers have found it expedient to destroy the old plates, and set up the entire book anew in type.

Chapter 8 is devoted to a consideration of syphilis, and is written by Henry D. Noyes. The whole chapter is written in the first person, and embodies the personal views and experience of Prof. Noyes, which are fully concurred in by Dr. Keys.

Concerning the curability of syphilis, Prof. Keys says: "Treatment throws confusion into the natural order of the appearance of the eruptions, postpones their outbreak, lightens their character, shortens their duration, and, in the most favorable cases, almost prevents them entirely."

Speaking of syphilitic impress upon the constitution of man, and of the protean forms of the disease, the author says, at page 535, "Hence the difficulty of saying when syphilis has ended, or, indeed, of deciding that it ever does end, since it so often permanently modifies the diathesis of the individual who has suffered from it." He does not think that a person should marry within four years after the appearance of a chancre; and then in such cases only as may have remained an entire year without any manifestation of the disease, at

least six months of which the patient shall have had no treatment. Whilst some persons have been known to marry with impunity in less than five years, it is a good rule to establish this as the shortest period; yet it is not safe to give a guarantee to a patient, even in five years.

Speaking of the value of the Hot Springs in Arkansas, Prof. Keys says, at page 554, after summing up the results of experimental observations with the water, "But all this is not the cure of syphilis; and my observation showed me plainly that the physicians who did well at the springs, used most unsparingly mercury by inunction and iodide of potassium internally in enormous doses; and this is exactly wherein the value of the springs seems to lie. Patients broken down, cachetic, with faulty stomachs, who have suffered lesions which fail to yield at home, because they cannot tolerate a sufficiently high degree of medication, are patients to send to the Hot Springs. There, under the assistance of hot water internally, and the baths, they can take a mercurial friction day after day without salivation which would overwhelm them at home, and there doses of iodide of potassium can be quadrupled without upsetting the stomach."

Taken altogether, Prof. Keys has presented a magnificent treatise, especially that portion which relates to syphilis. It is far the most creditable American production on this subject.

THE FRENCH CONGRESS.	The Congress for the discussion of tuberculosis found itself overrun with topics of interest. The principal questions discussed were the hereditary predisposition to tuberculosis; and its transmission from infected animals the flesh of which is taken as food, and through the milk of infected cattle. Chickens were declared to have been the medium of spreading the disease. A fresh impetus to experimental inquiry was the only valuable result of the labors of the Congress.
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CORRESPONDENCE AND SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, April
11, 1888,

Reported for PROGRESS.

The President, J. Solis-Cohen, M.D., in the chair.

After the regular order of business, Dr. John B. Roberts read the following description of a Loofah, a

vegetable skin-scrub for aseptic operations:

The necessity of scrubbing the integument thoroughly with soap and water, in order to remove dirt and secretion, before operating aseptically upon the part, has recently compelled the provident surgeon to carry with him to operations a bristle brush, such as is used for cleaning hands and finger nails. I have recently saved myself the expense of supplying brushes for emergency operations, and avoided the inconvenience of carrying away from the patients' house such wetted brushes, by using portions of the peeled and macerated fruit of the loofah or towel gourd (*Luffa Aegyptica*). A few of these segments are carried in my operating-case at all times, and, when once used, are thrown away. According to the London *Chemist and Druggist*, this gourd is grown extensively in the West Indies as well as in Africa and Arabia; but I am told it can be cultivated in Philadelphia gardens. It is a cucurbitaceous plant, with fleshy fruit which resembles, in shape and size, the Indian clubs used for calisthenic exercises. When the epidermis, mucilaginous pulp, and seeds are removed from this fruit, there remains the fibrous network or skeleton, which, when dried, acts so well as a scrubbing brush for the skin. This dried skeleton, when wet, is harder than a sponge, though perhaps rather softer than a bristle brush, and acts exceedingly well as a skin-scrub for obtaining an aseptic condition of the skin. I have been able to get with it sufficient friction not only thoroughly to cleanse the skin, but also to produce in a few moments an erythema. This could hardly be accomplished by so soft an article

as a sponge, which is, on account of its softness, unsuited for a surgical cleanser.

The prepared skeleton, or loofah, as it is called commercially, is cut, transversely to its long axis, into pieces about two inches long, which, if desired, may afterwards be split longitudinally. For my own use, I prefer the unsplit segment, which seems to have a rather rougher and harder surface, and better removes the dirt and secretions from the crevices of the skin. As the entire loofah can be bought for a few cents, these segments—of which from five to ten can be made from each—cost not more than two cents apiece; to throw them away after using is, therefore, no great extravagance.

It will be understood, I trust, that this material is available for scrubbing the skin of the patient, but it is not suitable for cleansing the spaces under the surgeon's nails; for that purpose I always carry a toilet nail brush. My advocacy of the loofah is for cleansing the skin of patients at whose houses a brush for cutaneous purification is not often readily obtainable, though a new and clean scrubbing brush, such as is used for floors, would be perfectly satisfactory.

I buy the loofahs which I use in private practice, and at the Polyclinic, of Genois & Laubach, 1201 Chestnut Street, who seem to have been the chief importers of the article in Philadelphia.

AN OVARIAN CYST.

Dr. J. W. White exhibited a specimen which he had removed on the previous day from a patient, in whom a diagnosis of pregnancy had been made and persisted in by an irregular practitioner. After removal of the cyst, at the suggestion of Dr. Joseph Price, he removed the other ovary in the hope of checking the development of a uterine fibroid which was discovered during the operation. The cyst and its contents weighed between fifteen and twenty pounds.

Dr. White also exhibited a large vesical calculus, and the bladder, kidneys, and ureters from a patient who had died in advance

of a proposed operation for the removal of the calculus by suprapubic cystotomy. The autopsy showed the existence of pyonephrosis and Dr. White congratulated himself, that he had escaped the necessity of recording a case of ether-death, or a death from shock, to one of which causes the fatal termination would have been ascribed, and, as the specimens showed, unjustly, had the case lived long enough to have come to the operating table.

About five days ago a young man was brought to his office suffering with abdominal pain, but apparently in fair health otherwise. He had a good complexion and there had been no emaciation. The pain was referred to the hypo-gastrium and the head of the penis, and the symptoms in general were those of stone. A large calculus was discovered immediately the sound passed the prostate, preventing further motion of the instrument. The patient was sent to the German Hospital and placed on a milk diet, rest in bed, etc., and arrangements made to do a suprapubic cystotomy at 2 P. M., on Tuesday, the 10th inst. On Monday the pulse was 82, temperature 98°, and the patient was very comfortable except for the fact that diarrhoea had set in, ten or twelve passages with straining having occurred in the twenty-four hours. But as this so often results from a sudden change to milk diet and a rectal tenesmus constantly accompanies vesical tenesmus, little was thought of it. The diet was changed, and hourly five-drop doses of deodorized tincture of opium ordered. The urine had a heavy deposit, blood, and considerable pus, but that was to be expected with a large calculus. There was no oedema, and, as stated, the general health appeared good. The patient, however, suddenly sank, and died in the night, without operation.

The autopsy showed a stone as large as a duck's egg in the bladder, the tissues being considerably inflamed and hypertrophied, and the calibre of the viscus much reduced. The kidneys exhibited extensive pyonephrosis, very little of their substance being left,

and that principally as the dividing walls of the multilocular cysts into which the organs were converted. The ureters were much dilated, so much, indeed, that at first they were supposed to be part of the small intestine.

There are various ways in which pyonephrosis may be produced from vesical calculus. There may be extension of inflammation through a cystitis involving ureters, etc., or it may originate as hydronephrosis through the vesical orifice of the ureter damming back the urine. Or the obstruction may be caused by the hypertrophy of the vesical tissues occluding the ureters, or from the frequent urinations due to a phimosis. Necessitating, of course, equally frequent contraction of the bladder walls upon the ureters. This case was evidently of long standing and is believed to have originated as a hydronephrosis due to damming back of the urine by hypertrophy of the bladder walls, causing the great dilation of the ureters shown in the specimens.

Dr. J. M. Barton exhibited a patient upon whom he expected soon to perform abdominal section. A boy, sixteen years old, presenting a tumor in the left side extending from the diaphragm to the level of the anterior superior spinous process, completely filling and distending the left half of the abdominal cavity, it is hard and dull on percussion. It can be felt in the flank posteriorly in the region of the kidney. There is nothing in the history to indicate an enlarged spleen. Although there has not been hæmaturia, and although we fail to find the colon where we would expect it, in front of the tumor, Dr. Barton considers the case one of sarcomatous kidney and proposes to operate shortly.

PROFESSOR

W. W. DAWSON,

The President of the American Medical Association will

be present at the meeting of the Mississippi Valley Medical Association in St. Louis, September 25, 26 and 27.

PROGRESS

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MEDICAL

EDUCATION.

The question which, above all others, has been constantly growing in interest, and which has been discussed from the presidential stand of every medical society in this country, is gradually being settled by the schools. It may be that agitation has contributed somewhat to the solution of the problem; but no requirement has yet been exacted which the schools have not promptly met. The increasing thirst for experimental knowledge has grown gradually until methods of experimental research now form the basis of laboratory demonstration in every regular medical college in the United States. The question of preliminary educational qualifications for students is constantly answered from the laboratories and the class-rooms of colleges. The instruments of precision used in diagnosis and in the study of pathology and hygiene, like those employed in ophthalmic and aural practice, can never be handled successfully by persons whose educational training has not been sufficient to include a fair knowledge of the science of physics; and so the man who is now able to successfully prosecute the study of medicine is necessarily a person of far more liberal educational training than the student of twenty

years ago. Legislative enactment has established, in many States, boards of experts to determine the proper qualifications for the medical practitioner. It has often occurred that these boards were composed of men totally incompetent to conduct the necessary examinations. Reference to some of the published questions which have been put to recent graduates desiring to practice in several of the States, readily indicates the necessity for the existence of those institutions known as postgraduate schools. These institutions are not, as some have said, an evidence of the inefficiency of regular medical schools; but they do afford evidence of the necessity for continued study on the part of the practitioner. Experimental research has developed so many new facts that the graduate of five years ago finds it necessary to seek admission to post-graduate courses of instruction, in order to learn something of the newly-discovered principles which regulate various branches of practice. The old-fashioned tirades embodied in presidential addresses against the degeneracy of medical colleges, now find few appreciative listeners. It is plainly manifest in the discussion of the various questions raised by essayists in societies, that the common stock of medical knowledge increases year by year; and those fresh from the school-room are annually better able to discuss practical questions than were their colleagues of previous years. This affords a fair exhibition of the advantages of clinical and demonstrative instruction in the medical schools; and it shows that the growth of medical education is to be measured precisely by the extent and character of experimental research. The graduates of the best medical colleges of ten years ago, seldom saw a patient except at a distance during the entire course at college. Now there are no schools so poor as to be unprovided with efficient methods of clinical instruction; and no graduate so barren of experience as not to have had personal charge of more than one patient before commencement day.

THE
MISSISSIPPI
VALLEY
MEDICAL
ASSOCIATION.

The Committee of Arrangements at St. Louis have decided that it is best for this body to meet September 25, 26 and 27.

The reason assigned in the circular is that it allows a more satisfactory arrangement with the railway companies for reduced rates of travel. The facts are about these: The great annual carnival will be in full sway at that time in the gay city of St. Louis, and all the railways centering there will allow great reductions in the rates of travel. Members of the profession attending the Congress at Washington will likewise have ample time to reach St. Louis. Those a little late in returning home from their summer vacation, may also find time to be present at the meeting. It is, therefore, upon many grounds, a better date than at first announced. No friend of organized effort to advance the medical profession can fail to recognize the value of this assembly. It will discuss nothing but questions of practical interest. No question of ethics or medical politics can, under any circumstances, according to the present laws of the organization, be injected into its deliberations. Every member of the regular medical profession in good standing at home, whether he belongs to another medical society or not, who is willing to sign the national code of ethics, may be admitted to membership. Dr. ISAAC N. LOVE, Lindell and Grand Avenues, St. Louis, Mo., is Chairman of the Committee of Arrangements. Dr. JOHN L. GRAY, 70 Monroe Street, Chicago, Ill., is Secretary. All communications should be addressed to one or the other of these gentlemen.

The Mississippi Valley Medical Association, though by no means as large a body as some others, has done more legitimate scientific work than any other medical society in the United States during the last ten years. It was formerly known as the Tri-State

(Kentucky, Indiana and Illinois) Medical Society. It grew to such proportions that at the meeting at Indianapolis in September, 1882, its name was changed, and its territorial limits extended from the Allegheny Mountains throughout all the territory west.

Trusting to meet a large number of the working element of the profession, the editor of PROGRESS looks forward to September 25 with no small degree of pleasure.

OUR FIRST
CITIZEN.

The great activity in commercial circles in the South, with a

constantly growing population means prosperity. It means the natural resources of this section of the country are to be developed. It means we are to grow in material and educational wealth according to our resources. Louisville had 123,875 inhabitants in 1880; she now has 200,000. She then had but one outlet to the South: she now has three. Cincinnati commanded a wide section of rich territory penetrated by her Southern road. This Southern road had no Northern outlet. It is now turned by the Louisville Southern through Louisville, and on to the North and East, via the Monon and Big Four combination, whilst Louisville has direct communication with the great Erlanger system. The Louisville Southern is one of the greatest of all the forces which have moved us on to our unprecedented growth and prosperity during the past year.

Colonel Bennett H. Young, through whose indomitable will and exhaustless energy the Southern road and its connecting bridge across the Ohio River have been built, is entitled to be designated the first citizen of Kentucky. Through his public spirited enterprise the medical colleges of Louisville are accessible to a large scope of country, with which we formerly had no direct communication, and the medical students from which went to other centres of education.

The Louisville Southern runs through the best Quail grounds and across the best Bass streams in the country.

PROGRESS

A Monthly Magazine for Students and Practitioners of Medicine.

"I HOLD EVERY MAN A DEBTOR TO HIS PROFESSION; FROM THE WHICH AS MEN OF COURSE DO SEEK TO RECEIVE COUN-
TENANCE AND PROFIT, SO OUGHT THEY OF DUTY TO ENDEAVOUR THEMSELVES, BY WAY OF AMENDS, TO BE A HELP AND
ORNAMENT THEREUNTO. THIS IS PERFORMED, IN SOME DEGREE, BY THE HONEST AND LIBERAL PRACTICE OF A PROFES-
SION; WHEN MEN SHALL CARRY A RESPECT NOT TO DESCEND INTO ANY COURSE THAT IS CORRUPT AND UNWORTHY THEREOF,
AND PRESERVE THEMSELVES FREE FROM THE ABUSES WHEREWITH THE SAME PROFESSION IS NOTED TO BE INFECTED; BUT
MUCH MORE IS THIS PERFORMED, IF A MAN BE ABLE TO VISIT AND STRENGTHEN THE ROOTS AND FOUNDATION OF THE
SCIENCE ITSELF; THEREBY NOT ONLY GRACING IT IN REPUTATION AND DIGNITY, BUT ALSO AMPLIFYING IT IN PROFESSION
AND SUBSTANCE."—*BACON*.

VOL. III.

LOUISVILLE, KY., OCTOBER, 1888.

No. 4

GENERAL MEDICINE.

HEBEPHRENIA.

BY

WILLIAM A. HAMMOND,

M. D.,

*Surgeon General United
States Army (Retired
List).*

NEW YORK,

Read to the Mississippi Val-
ley Medical Association,
at St. Louis, Mo., Sep-
tember 25, 1888.

By Hebephrenia is to be understood a special form of mental derangement occurring in young persons of both sexes at or soon after the age of puberty. The existence of this peculiar variety of insanity has long been known, and

isolated cases have been published in the journals devoted to mental diseases, but it is only within comparatively recent years that it has received anything like the attention it deserves. The first systematic description of the affection published in this country was, I believe, that given by me in my *Treatise on Insanity*, is sued about five years ago.

As the disease is certainly becoming more common, owing doubtless to the vicious manner in which young people are brought up, and as several interesting cases of the morbid condition in question have recently been under my care, I hope that what I have to say at present will prove worthy of the attention of the members of the Mississippi Valley Medical Association.

The disease in the beginning is manifested chiefly in the emotional part of the mind. The patient becomes depressed in spirits sometimes to such an extent as to cause more or less well-directed attempts at sui-

cide, though these are rarely so persistent as to lead to fatal results. Generally the subject repents before he has done enough in the way of self-destruction to cause death. In one case under my observation, a boy about sixteen years of age, plunged into the river head foremost after leaving a note on the wharf that he was tired of life, but with the first touch of the cold water he changed his mind, for as soon as he rose to the surface he struck out vigorously for the shore, and returned home much colder if not wiser, than when he left it.

In another the patient, a youth who had just reached the age of puberty, and who had for several months been complaining of his hard fate—although there was nothing in his condition in life to warrant his gloomy forebodings—took a notion to kill himself with a pistol. He very carefully loaded the weapon, and placed the muzzle over his heart. Before pulling the trigger, however, he weakened in his purpose, and extracted the ball from the cartridge.

He again pointed the pistol at his heart, but before he discharged it, deflected the muzzle slightly to the left, so that the only effect was the spoiling of some clothing and a slight burning of the skin.

There appears with these people to be a settled conviction that the efforts they make to perform the duties or tasks which have been assigned them are not adequately appreciated, and that no matter how faithfully they may work, they will derive no personal advantage from their labors. The future,

therefore, appears dark and forbidding, and the element of hope which is of such vast importance as an incentive to youthful minds, is gradually eliminated from the mental organism of the boy or girl, as the case may be. Of course this is all morbid, but it is none the less real so far as they are concerned. At first there is only doubt, but this very soon becomes a fixed apprehension or fear which gradually increases until it becomes a predominating influence. The subjects feel that they are not understood, they misinterpret the actions of those around them into evidences of conspiracies.

They become suspicious of those with whom they have heretofore associated and whom they have regarded as their best friends, and they make themselves not only the enemies of those they have been accustomed to love and respect, but of the whole human race.

It is not long before there is a marked deterioration in their moral qualities. Conceiving as they do that fair and honest dealing will avail them nothing, but on the contrary will be employed to their disadvantage, they do not hesitate to lie, to cheat, to steal, and to resort to all kinds of deceit and subterfuge to accomplish any object they may have in view.

"It would have been no use," said a boy of fifteen to me, after he had run away from school with money and other things that did not belong to him, "for me to have asked the principal for money and to let me go home, as I was ill. He would have refused and have punished me besides, so I just took what I could lay my hands on and went off at night when they were all asleep. You may send me back, but I will run away again the first chance I get. Everybody is down on me there. If I learn all my lessons they find fault with me, and if I don't learn them it is no worse; so what's the use? Send me back, but the next time I run away I won't come home, and you won't find me either."

He was returned to school, when, in the course of less than three months, having

made five attempts at suicide (once by hanging with his suspenders, once by choking himself with an apple-core, once by jumping out of a second-story window, by which he broke his leg, once by taking laudanum, and once by shooting himself with a shotgun), the principal refused to have anything more to do with him. He was brought home, and I recommended his confinement in a lunatic asylum. He, however, became aware of what was in contemplation, and the night before he was to go he escaped from the house, since which time no intelligence has been received of him.

Generally, it is the case, that the symptoms of Hebeephrenia are developed so gradually that the disease has been well established before it is recognized as a form of insanity to be combated by active medical and hygienic treatment. The peculiarities of character and disposition which are being developed are generally regarded as so many evidences of wickedness to be treated with severity or perhaps to be let alone as beyond cure by moral regimen. Schools get rid of such pupils as the one above referred to, and very properly, for their example is decidedly pernicious, and parents not knowing what to do with them, put them, if pecuniarily able, under the charge of a tutor instructions to eradicate by some process which the tutor is supposed to know, the evil propensities which in some way or other have been contracted; or they send them to another school from which they either soon elope or are expelled; or they are kept at home to do nothing but to remain apt subjects for the future development of the disease.

In any event this development is sure to come. Delusions of various kinds begin to make their appearance, and these are formed not from illusions or hallucinations which are never present in the inception of the disorder, but out of the morbid thoughts of the subjects themselves, and are almost invariably of an intensely selfish character. Thus a young woman, seventeen years of age, who

came to my clinique at the Bellevue Hospital Medical College, and who had several times ran away from home and been brought back by the police, had the idea that she had been especially endowed by the Virgin Mary with the ability to read the thoughts of people in any part of the world. Her father was a sailor, and was absent from home, and she was continually reminding her mother of what he was thinking at any particular moment, and these thoughts were always of her and the deep pain he felt at the idea of the bad manner in which she was treated. On one occasion she went suddenly into the kitchen and threw the dinner into the fire, saying that her father thought it was not good enough for her to eat. Again she picked a mattress to pieces, because her father thought it was not soft enough for her to sleep on; and on still another occasion she threw all the crockery out of the window and broke the furniture because, as she said, her father thought she ought to eat out of silver and use mahogany chairs and tables. Finally, intelligence was received of the death of her father, when she laughed and said she had known all along he was not coming home, but that instead of being dead he had married another woman in Lisbon, and had taken her to the East Indies. Soon after this, she went before a police magistrate and made oath that her mother had beaten her severely, showing some bruises which she had received on the ice, and returned home with a policeman armed with a warrant for her mother's arrest. In this case masturbation was verified.

The disease went on unchecked, and the patient is now in a state of hopeless dementia.

In another instance the patient, a young man who had been found impracticable at every school he had attended, took the notion that all the misfortunes that had befallen him were due to the fact that his teachers and companions were jealous of his intellect, and had for several years been industriously

engaged in the work of undervaluing his abilities, and of keeping him in a subordinate mental position. He declared also at home he was not understood; that no one was more assiduous in the performance of filial duties than he, but that all his efforts were misinterpreted and ascribed to an inherently depraved nature. It was found impossible to keep him at any steady employment, for similar ideas dropped out on every occasion, resulting either in his throwing up his work, or being ignominiously discharged. Finally he conceived the delusion that he was under the special protection of Providence, and that no matter how others conspired to injure him, or even if he should attempt maiming himself, or suicide, God would prevent his suffering any danger either to his mind or body.

As an evidence of his implicit faith in this belief, he one day threw himself out of a second-story window, but though he broke his arm and received several severe bruises, he maintained that he had escaped. He was in the habit of holding lighted matches under his hands, and though he always succeeded in inflicting more or less severe burns, he was firm in his declaration that he had received no injury or endured the slightest pain. Finally he took a cold bath in his clothes and exposed himself in the open air for over an hour at a temperature near freezing point.

Through this last act of folly he contracted pneumonia from which he died.

In addition to the involvement of the intellect as regards false conceptions, there is always a marked deterioration of the force of the mind. The power of concentrating the attention is diminished, sustained thought upon any one subject becomes impossible, and the ability to comprehend is greatly impaired. The facial expression exhibits the mental weakness of the patient, and there are frequent paroxysms of silly laughing, the reason for which is never given. Accessions of acute mania are not at all uncommon at this period, and then illusions

and hallucinations are formed. In a young gentleman the subject of Hebephrenia whom I saw in consultation with Dr. Kittredge, of Fishkill, and who had several times run away from home, there were almost constant hallucinations of hearing and paroxysms of imbecile laughing. He had several attacks of acute mania. In another, whom several years ago I committed to Dr. Kittredge's asylum, there were similar phenomena conjoined with well marked systematized delusions.

These symptoms may exist for several years before the passage of the affection into the stage of dementia ensues. Sooner or later, however, this is the termination.

Probably Hebephrenia is equally common to the two sexes, although Fink restricts it entirely to males. It appears to be induced by any cause capable of lessening the vital powers of the individual among which masturbation and also the inception of the menstrual function are predominant. One of the worst cases I ever saw occurred in a boy of sixteen, from South America, and was the result of excessive masturbation. I sent him to Dr. Parsons, at Sing Sing, and it was found necessary to watch him night and day, without intermission, to prevent the act of onanism. The case was in all respects a typical one of Hebephrenia. Several months had elapsed when the patient first came under my observation; there were then illusions and hallucinations; there had been several acute maniacal attacks, and there was the characteristic tendency so frequently observed to run away.

The favorable result obtained by Dr. Parsons's care goes far to lessen the force of the gloomy prognosis usually expressed in regard to the affection.

Undoubtedly masturbation, when practiced to excess, may modify to a greater or less extent the symptoms of Hebephrenia, but the product is not entitled to be considered a separate form of mental derangement. The insanity of masturbation is simply Hebephrenia with the additional phenomena due

to excessive onanism. Just as we meet with the peculiar condition produced by this vice without there being Hebephrenia, so we encounter the latter affection when there is no reason to suspect masturbation. Nevertheless the connection is an important one, and ought not to escape the attention of the physician. The influence of masturbation in causing insanity has been known from the earliest period, but the relation has never been so graphically set forth as by Dr. Luther Bell, of the McLean Asylum in Massachusetts, who published his observations nearly forty years ago. It has also been described by Schroeder Van der Kolk, but many authors, as for instance Ellis, fail to discriminate between cause and effect in their remarks on the relation of onanism with insanity. Nothing is more common than for lunatics of all types to practice masturbation, and doubtless the vice produces modifications in the physical and mental condition of the patient.

Hebephrenia is most apt to make its appearance not at the very beginning of puberty, but a year or two afterwards when the system is experiencing to the utmost the demands made upon it. Hereditary influence is certainly a strong predisposing factor in its etiology.

It is generally the case that patients affected with Hebephrenia suffer more or less from constipation. In some cases the intestinal inertia is so great that the bowels do not move more frequently than once in two or three weeks, when violent diarrhœa is liable to supervene, to be followed by another period of constipation. There are rarely any other symptoms of a marked character. Sometimes there is insomnia, and again there may be an occasional headache, but these are not prominent characteristics of the disease.

The treatment that is proper in Hebephrenia naturally divides itself into moral, hygienic and the medicinal.

Under the first named head are embraced all those means which are directed toward

obtaining control of the mind of the patient, and guiding it so far as may be possible in a right course.

If after sufficient experience it should be found that this cannot be done without subjecting the individual to physical restraint, there should be no hesitation in depriving him of his liberty. But to incarcerate him in an ordinary insane asylum where he will be surrounded by lunatics and left to his own devices, is about as bad a plan of procedure as can be adopted. Nothing can be better for a patient, the subject of Hebephrenia, than to place him under control of a sensible and well educated physician who understands the necessity for mental and physical discipline, and who is endowed with sufficient firmness to carry out his principles. It is impossible to lay down any rules for the guidance of such a physician which will be applicable to all cases of the disease, for no two can be treated in exactly the same way.

One word, however, may be said, and that is, that he must thoroughly comprehend the efficacy of a proper system of rewards and punishments. It may take several years before success is obtained, but I have seen enough to be firmly convinced that many cases of the disease that would otherwise be irreclaimable may be saved, and the subjects made useful members of society.

Of course it is advisable that the sanitary surroundings of the patient should be as perfect as possible, and there should be some means for ensuring active and even physical exercise daily, and if possible in the open air. The more I see of patients affected with any form of mental derangement, the more I am convinced that bodily fatigue compensated for by sufficient rest and good nutritious food rank among our most efficient means of cure.

As to medicines there are few points which are deserving of consideration. If there is undue sexual excitement, some one of the bromides should be administered in full doses. They are also efficacious in subduing mental agitation and procuring sound

and refreshing sleep with the least possible injury to the patient.

They are of little use unless administered in doses of at least fifteen grains three times a day, with a double dose at bed time if the condition of the patient seems to require the increase.

The bowels should be open daily, and for this purpose I have found nothing better than a pill taken at bed time, compounded as follows:

R Aloes ext. aquosæ gr. xx.
Fel Bovis exsic. gr. xxx.
Podophyllini gr. ii.
Mft. in pill No. X.

Dose—One at bed time.

Indeed I have often found great benefit derived from the administration of this pill nightly, or every alternate night for a month or more at a time, even though the bowels be not obstinately constipated. It certainly lessens venereal excitement and produces mental sedation when more direct means fail. Any intercurrent disorder that may arise in the course of the disease should be combated by appropriate measures. Under such a course of treatment I have found Hebephrenia by no means the hopeless affection which it is commonly regarded to be. but I again cannot too strenuously insist upon the point that all measures are likely to fail unless the patient can be removed from his home surroundings, and subjected to scientific and strong-minded discipline.

THE CONGRESS.

Eleven eastern medical societies composed the late American Congress. Two new associations, the American Pediatric and the Association of American Anatomists, were organized during the session of the Congress and made application for admission.

The American Association of Obstetricians and Gynecologists applied also for membership, but was denied on the ground that it is not two years old.

ADVANTAGES OF PROPER FOOD.

BY

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That there are certain advantages to be gained from dietetics is beginning to be a subject of interested consideration by the medical profession. In fact, there are many diseases that cannot be

successfully treated without dietetic considerations, such as diabetes, phthisis, typhoid and some other of the common diseases.

Ephraim Cutter, M. D., L. L. D., in 1884 visited a grist-mill and noticed the winter wheat as it came through the smut-mill, clean and fair, and said to himself: "Why not use this clean"—WHOLE—"wheat for food? It contains all the chemical elements in proper proportion for nourishment—of *certain* tissues and *all* tissues—that our Creator intended mankind should have when wheat is eaten. Why not save the aroma and bouquet of the wheat in cooking, and not lose it in the milling by standing long, ground up and *outrageously bolted*?" The result was that the doctor and his interesting family have been eating this cooked *whole* wheat for over four years. A wise man!

Magendie fed dogs on flour—*bolted*, note!—exclusively, and they died in forty days, while other dogs thrived on the *whole* of the wheat. Judge Abbott, of Boston, knew of some ship-wrecked sailors who were obliged to live on flour—the *bolted variety*, note!—and they nearly perished from starvation. How could they help it, for almost no tissues were being nutrified.

While *all* the tissues will die if fed on gluten and starch alone, there are certain ones that cannot form at all, if, when forming, such pabulum is presented to the germs. These are the petrous tissues, the teeth.

There never was a time since man walked the earth when there were so many edentulous persons, and so many subjects with decayed and broken-down teeth as we find on every hand. This is not owing to a want of hygienic attention, nor frequent dental

operation, but is the result of *starving* the petrous tissues *at the time they are forming*.

There is no food prepared by the Almighty for human consumption that contains the carbonate and phosphate of lime and magnesium that are so *rightly balanced* and *easy of division* and capable of being so perfectly appropriated as is the *whole* product of any of our cereals.

There are many children that, for various reasons, are deprived of human breast milk and have to be brought up by hand, the bottle. Suppose that the child is to receive nothing but distilled water from that specific bottle, it would compare moderately favorable with *bolted* wheat flour, farina and barley water.

Cow's milk is a pretty good substitute for human milk, but is open to some very serious objections, in that its casein is not as flocculent and easily digested as the casein of mothers' milk. Indeed, some children cannot digest cows' milk on account of the tough casein that this fluid contains. It forms curds and frequently works both ways, seriously disarranging the digestive apparatus. While it may be easy to obtain good cow's milk in the country, in large cities such investigations will meet with failure. Cows' milk can be made more easy of digestion by partly pre-digesting the milk with pancreatine. But this is difficult to do without considerable experience and great caution. If the combination is given too much time, the milk will be made bitter. If too much heat is applied the ferment will stop its work and the milk will be but little, or not at all digested, resulting in injury to the child.

There are several artificial foods on the market designed for infants. Some of them are classed as starch foods, some as malt foods and some as milk foods, which are *vastly superior* to the other two varieties.

Starches are digested by the amylolytic ferments found in the saliva, pancreatic and intestinal juices. An infant under one year of age does not possess a sufficient

amount of this ferment to digest raw starch. These carbo-hydrates in this form will pass through the intestinal tract largely in an undigested condition, rasping their way along, denuding the mucous coat of epithelium, establishing diarrhoea and serious bowel lesions. Artificial foods for infants that contain new starch is ruinous.

All this difficulty can be wholly avoided by the aid of intelligence and time, if the starches are converted in *dextrine*, a gummy substance. This is done by baking the carbo-hydrates at a temperature of 350° or 400° for some eight hours. But this cannot be done in an artificial food after it has been put on the market, especially if it contains fifty per cent. of deciccated cows' milk, as Carnrick's Soluble Food does. Nor with Nestle's or Mellin's, which are also milk foods, containing from 10 to 20 per cent. of milk. This starch conversion into dextrine must be performed by the manufacturers.

Dextrine will pass through the stomach without much change, and when it reaches the first gut or duodenum and becomes bathed with the fluid from the pancreas, and following intestinal juices, it is ready for immediate absorption, because it is converted into maltose and is beyond the danger line of the action of the lactic and hydro-chloric acids of the stomach which so readily attack and sour malted baby foods and so frequently ferment the starches.

If malted baby foods could be ingested directly into the duodenum, as in this shape the starches are in their saccharine, or final stage, then all would be well, because this final sugar stage is ready for *immediate absorption*, and not having passed through the stomach has had no opportunity to turn into a sour beer. But this cannot be done, therefore the carbo-hydrates designed for infantile nutrition should *not* be ingested as a raw starch or as a malted preparation, but as dextrine, which *does not* receive its conversion into soluble sugar until it reaches the duodenum. Therefore, those baby foods whose carbo-hydrates have been con-

verted away past dextrine into malt, maltine, maltose, or malt sugar are so liable to ferment and sour below the first gut.

Those foods that are considered as belonging to the starch group are Wells, Richardson & Co.'s, whose albuminoids, according to Stutzes are 9.05 per cent., Lime Salts 2.26, Phos. Acid 0.688, and Digestion 8.35. Ridge's food 8.76, Salts 0.48, Phos. Acid 0.260, Digestion only 7.97, Imperial Granum 10.73, Salts 0.37, Phos. Acid 0.167, Digestion 9.55.

Two malt foods, Horlick's Albuminoids are placed at 11.30 per cent., Salts 2.76, Phos. Acid 0.421, Digestion 10.85, Mellin's Nitrogenous Matter 8.34, Salts 3.00, Phos. Acid 0.583. Ease of digestion is placed as low as 7.38.

As has been stated before, there are three milk foods. Nestle's contains of the albuminoids 11.46 per cent., lime salts 1.75, phos. acids 0.630, and ease of digestion 11.09. The Anglo-Swiss proteins are 12.38 per cent. the highest of any so far. Salts 1.95, phos. acid up to 0.800, and ease of digestion on the rising grade to 11.20. Carnrick's Soluble Food contains of the albuminoids 18.22 per cent., and woman's milk 17.08 per cent. The albuminoids are a very important constituent of natural or artificial milk. The inorganic constituents, the *lime salts* and *phos. acid* which are the *true petrous tissue builders*, are respectively 2.991 and 0.874, while ease of digestion is equal to human milk, being 16.45 per cent.

If a child is to be fed from the maternal breast, the mother should not partake of any bread that is not constructed out of the *whole* of the grain eaten. Furthermore, *she ought to eat liberally*, three times a day, of either oat meal, Graham bread, or brown bread. The latter is constructed out of rye meal and corn meal. It is of the highest importance to have a liberal amount of these indispensable lime salts to pass *through the umbilical cord* and the *mammary glands*.

Those children who have been gestated, born and brought up under such circum-

stances, and who continue to ingest these whole grain foods do not, cannot lose their valuable teeth early. It is the calcareous matter and not the soft solids of tooth composition that enables these organs to resist all disintegrating influences.

Not only the pregnant woman, but she who nurses should be liberally fed on the coarse bread foods. As usually furnished by all nurses, the lacteal fluid is lamentably deficient in petrous tissue builders, the lime salts. Therefore, it is believed by the writer, based upon a long experience, that a good artificial food for infants, possessing a due amount of the albuminoids, ease of digestion and well balanced in other respects, especially in phosphoric acid and the lime salts, is very much superior to either cows' milk or indifferent maternal nursing.

THE DANGERS OF GONNORRHEA.

Perhaps the literature of no other subject in all the science of medicine has undergone a more radical change in the past decade, than that of chronic gonnorrhea. What was a few years ago considered a simple affection, almost beneath the notice of the physician, and of little importance to either the patient himself or his family, has now come to be regarded as the prime cause of many complications heretofore attributed to other sources. It is now known that a man may infect a woman long after he is apparently well and every macroscopical appearance has disappeared. In fact it is difficult for an expert even to say when a patient is entirely cured, indeed, it is doubtful if gonnorrhea in the female is ever cured. A German microscopist has made an examination of the discharge from the vaginæ of a large number of women supposed to have been suffering from leucorrhea, and found in many cases the specific gonococcus of Neisser. A very large per centage of the cases of endometritis salpingitis and ovaritis are said to be due to this cause.

QUEBRACHO

IN DYSPNŒA.

BY

WALTER P. ELLIS,

M. D.,

Livermore, Ky.

Gaillard's Journal,

In a copy of the *Therapeutic Gazette*, the date of which I do not now remember, appeared an article setting forth the good effects of quebracho (*Aspidosperma quebracho*) as a remedy for dyspnœa. The article

attracted my attention the more forcibly from the fact that I had some weeks previous experienced a great deal of trouble from a case in which dyspnœa was the prominent symptom, and had found nothing that gave permanent relief. The article referred to gave such glowing accounts of the efficacy of the new drug in dyspnœa from any cause, that I determined to procure a sample and give it a thorough trial in the first case coming under my observation. I accordingly wrote Parke, Davis & Co., who sent me a small quantity of both the solid and fluid extracts, sufficient to test its merits. That was five or six months ago, and since then I have used the drug in several cases, and with such uniformly good results that I feel constrained, for the benefit of my brother practitioners, to report my experience in its use, which has been such as to give me great confidence in its efficacy. In the "Working Bulletin" on this drug, sent out by Parke, Davis & Co., I find that a few observers report disagreeable effects, such as "headaches, partial unconsciousness, dizziness, and copious salivation," following its continued use for any considerable length of time. These unpleasant secondary symptoms I have not observed in any of the cases in which I have used the drug, although prepared to encounter them by the experience of others. It is very probable that the size of the dose and the manner of exhibiting it have much to do with the production of those untoward effects, and that a proper regulation of these would enable us to obviate them entirely. The statement that "the frequency of res-

pirations is diminished by the drug, the more decidedly the greater their excess has been over the normal condition," I have verified in my cases. In other words, those cases characterized by violent dyspnœa with marked cyanosis are more rapidly and certainly relieved than are those in which the symptoms are less urgent.

Up to the present time I have used the drug in seven cases, distributed as follows: one of abdominal dropsy, causing dyspnœa; two of chronic bronchitis, with pulmonary emphysema; and four of tubercular disease of the lungs; and in all of them it was beneficial to a degree beyond my expectations, in no case failing to materially increase the comfort of the patient. I select one case from each class for report.

CASE I.—Mrs. L. W., aged 38, mother of five children, had been in bad health for several years, and in the fall of last year (1886) she began to suffer from ascites. During the past winter she would have frequent attacks of dyspnœa due to the dropsical accumulation in the abdominal cavity, which finally became so severe as to seriously alarm her friends. All the usual remedies had been tried, with little or no benefit, by the practitioner who had charge of the case, and at his suggestion I was called in consultation. In connection with treatment for the relief of her general condition, she was put upon the solid extract of quebracho in two grain doses for the relief of the dyspnœa, given at the time an attack was threatened, and repeated as often as was indicated, with the result of affording almost complete relief from the most distressing symptom.

The sample I had obtained was soon exhausted, when I ordered a fresh supply, as the patient was enthusiastic in its praise, declaring that it "was worth its weight in gold." Its use was continued in this case until the cause which had produced the symptom for which it was given was removed by appropriate treatment, and she is now fully restored to health. Its action in

this, the first case in which I had used the drug, was remarkable; the difficulty of breathing was at times so great as to be alarming, when two grains of the solid extract was sufficient to give almost immediate relief, without any bad effects whatever.

It had no action upon the pulse in this case, except to render it a trifle more full without effecting the rate.

CASE II.—A negro man, of more than the ordinary intelligence of his race, forty years of age, and by occupation a farmer, has been a sufferer from bronchial catarrh, with emphysema, for the past two or three years. He is able to walk about, but the least exertion gives rise to a difficulty of breathing which is very distressing. He had been under my care about eighteen months before I had obtained the quebracho and no remedy that had been administered had been capable of preventing or cutting short the attacks of dyspnœa. Upon the occasion of his first visit to my office after I had obtained the drug, I gave him the entire sample of the fluid extract, about one ounce, with instructions to take a teaspoonful whenever he felt the difficult respiration, and also take a dose just before undertaking any of the small tasks which had previously given rise to an attack. Several days subsequently he returned for a fresh supply, saying that it "had acted like a charm," and that with it he was able to walk about his small farm and attend to its management without experiencing to any great degree the ill effects which had previously followed the slightest exertion. He seemed greatly disappointed upon hearing that he had exhausted the supply on hand, but this feeling was somewhat mitigated when he was informed that I would give him the same drug in a different form. I accordingly gave him a lot of gelatin capsules, each containing two grains of the solid extract, and instructed him to use them in the same way—*i. e.*, to take one capsule whenever an attack of dyspnœa was threatened, and also to take one just before

engaging in work of any sort. He has now been taking it perhaps six months, and while his general condition is not much changed for the better, by taking the quebracho as directed he is enabled to prevent or cut short the attacks which had, previous to his beginning its use, made his life a burden to him.

CASE III.—Mrs. M. E., a widow lady, aged 63, of a tuberculous family, was treated twenty years ago by her family physician for phthisis, and with such success that she gradually regained her health to the extent that she was enabled to attend to her household duties. But the germs of the disease were not entirely eradicated from her system, and for the past four or five years she has been a sufferer from that dread disease. It is unnecessary to give a minute description of her physical condition at the time she came under my care; suffice it to say, that she presented all the symptoms of a fairly well-developed case of pulmonary tuberculosis. Upon awakening in the morning she would be seized with an attack of coughing, accompanied by great dyspnoea of an asthmatic character, which would last sometimes for several hours, and, passing off, would leave her in a greatly weakened and helpless condition. Under appropriate treatment the cough was considerably relieved, and she seemed better in every respect, with the exception of the dyspnoea, which continued to return at regular intervals, and at times was so severe as to be alarming. At this juncture I determined to give the quebracho in combination with remedies for the relief of the cough, and accordingly wrote the following:

R
 Syr. prun. virg.,
 Syr. tolutani.
 Ext. quebrach. fld., ññ 5i
 Acid. hydrocyanici dil., gtt. xxiv
 Morphinia sulph., gr. iss
 M.
 Ft. sol.
 Sig.—Take a dessertspoonful as often as necessary to afford relief.

After the first two doses, each containing two-thirds of a drachm of the quebracho, the difficulty of breathing was very considerably reduced, the respirations sinking from 46 to 24 per minute in three hours, and by continuing it according to direction she was enabled to enjoy a longer period of comparative ease than she had experienced for months.

As before mentioned, these asthmatic attacks showed a tendency to come on in the early morning shortly after awaking from sleep, and, with the object in view of preventing them if possible, I gave this prescription:

R
 Ext. quebracho, gr. xviii
 Morphinia sulph. gr. iss
 M.
 Ft. pil. No. xii

with instructions to take one pill every morning as soon as she awoke, and before attempting to rise, to be repeated in an hour or two if required. While this did not prevent the paroxysms entirely, it had the effect of shortening them very materially and lessening their severity. The good effects observed from it were sufficient to induce her to continue its use for two months, at which time she removed to a neighboring city and passed from under my care.

In conclusion, I would say that, while my experience with this drug is as yet limited, it has been such as to give me confidence in its power to relieve to a great degree this distressing condition which so often complicates the diseases of the respiratory and circulatory systems, and to convince me that it is entitled to more extended use in all cases in which dyspnoea is a prominent symptom, no matter what may be the primary cause.

As to its mode of action, the theory of Penzoldt, which is that the drug, by its peculiar influence exerted directly upon the blood enables it to absorb more than its usual quantity of oxygen, is probably the correct one.

GENERAL SURGERY.

MULTIPLE
CHANCRE
OF THE
PALATE.

BY

A. H. OHMANN—

DUMESNIL,

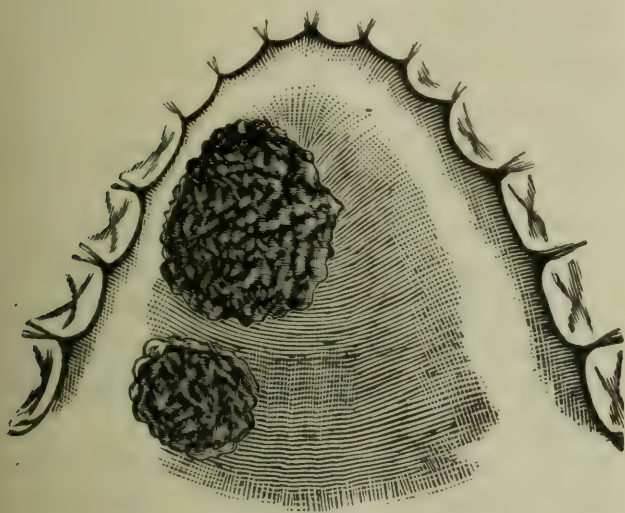
A. M., M. D.,

ST. LOUIS, MO.

Read to the Mississippi
Valley Medical Associa-
tion, Sept, 27, 1888.

Extragenital chan-
cres are forms of the
primary lesion of syph-
ilis which always pos-
sess more than a pass-
ing interest. They
are interesting not only
on account of their
location, but also in an
etiological point of
view. The chancre
of the hard palate is
one which is rather

uncommon, and the number of such observed
is very small. These points will be con-
sidered after a brief recital of the case
observed.



Case.—H. W. G——, male, widower,
aged 54, was referred to me on Sept. 23d,
1887. Upon inquiry, the patient stated
that he had always enjoyed good health,
and that his parents had been healthy. On
Sept. 1st some sores had appeared upon his
hard palate, and had persisted, although
they did not inconvenience him much. He
did not remember how he had acquired
them. He did remember, however, that
he was in the habit of smoking a pipe and
that a number of young men, with whom
he came in contact, frequently smoked the
same pipe. About four or five weeks prior

to the appearance of the sores he tore or
scraped the mucous membrane of his hard
palate with the mouthpiece of this pipe.

When seen by me a physical examination
revealed two chancres of the hard palate,
situated upon the right side, as shown in the
engraving. The anterior chancre nearly as
large as a silver quarter dollar, with indurated
and elevated borders, of a roundish shape
and covered with a muco-purulent secretion.
The edges of the chancre were distant one-
eighth of an inch from the border of the
gums. The other chancre, also roundish
in shape, was about the size of a silver dime
and posterior to the large one, a space of
an eighth of an inch intervening between
the two. It also was raised at its borders
and covered with a secretion similar to that
of the other. The ulcers were both super-
ficial and had a foul smell. This latter may,
however, have been due to the gums in
part, at least, as they were in a bad condi-
tion as also the teeth. Upon examining the
body, a well-marked erythematous syphilide
was noted upon the chest.

The ganglionic involvement did not exist
except in the submaxillary lymphatic glands.
Here both sides were involved, but more
markedly so on the right side. A suspic-
ious gland beneath and behind the right ear
also existed, but the induration was not suf-
ficiently marked to be, in any degree, con-
clusive. There being no doubt of the
nature of the case, the patient was ordered
one-twelfth grain of bichloride of mercury,
three times a day, in pill form.

On Nov. 18, the patient called again,
complaining of frontal headache and fever.
Upon examination he presented a well-
marked squamous syphilide, involving both
the trunk and extremities. In view of this,
he was placed upon one-eighth grain of the
bichloride four times daily, and soon began
to mend. He was also enjoined to wash
his teeth carefully after each meal. In
spite of this he complained, some time after,
of his teeth hurting him. His gums were
soft and tender, and he was advised to dis-

continue the mercury. His physician reports that he has followed up the treatment, and the patient has had no more symptoms of the disease.

Such, in brief, is the record of the case, a bare outline of which has been merely sketched for the purpose of calling attention to two points, viz: The rarity of chancre of the hard palate, and the manner in which the initial lesions were contracted in the above case.

Before taking into consideration either of these points, however, I desire to state that the patient was subjected to a rigid examination to determine the presence of a chancre upon any other portion of the body. A careful search failed to reveal either the presence or the remains of a chancre, and the lesions of the palate appeared so typical and were accompanied by such conclusive symptoms that no reasonable doubt as to their true nature could exist.

In looking over the literature of the subject it is a notable fact that the majority of modern authors, while referring to the existence of extra-genital chancres, and more especially to unusual localities, fail to mention the hard palate, although they specify such sites as the buccal cavity, the tongue, the gums and the tonsils. The earliest mention of chancre of the palate which I can find is Astruc¹. All authors are in accord on the one point that any region may be involved and mention the tonsils as the most common site in the pharyngo-buccal cavity. That chancre of the palate is a very infrequent, if not a rare condition, is amply proven by statistics. Robert states² that during his residence at the Hôpital du Midi he saw 188 extra-genital chancres, and upon examination of the details, it is found that not one involved the hard palate. Jullian has published a table quoted by Fox³, in which he records 1977 chancres. Of

these 126 were extra-genital and two were of the hard palate. Another record, quoted by Bumstead and Taylor, is of the Hôpital du Midi. In 471 cases of extra-genital chancres observed in men not one was of the hard palate, nor was such a case observed in 130 cases in women, observed at the Antiquaille Hospital of Lyons Carrier. A record of 23 cases of extra-genital chancres is given by Peterson⁵, but not one case similar to the one under consideration is mentioned. M. Nivet⁶ has gathered the record of 595 cases of extra-genital chancres, and of this number three existed upon the palate in as many cases. A. Morâl-Lavallée⁷ saw in Fournier's clinic, from Feb. 1, 1887, to Feb. 1, 1888, 48 extra-genital chancres in 45 patients. In all this number there was not one in whom the hard palate was implicated. Besides this a large number of isolated cases of extra-genital chancres, other than of the hard palate, are reported, and a rough estimate would show about 5 cases in 2,000. Of course, I do not pretend that this is a complete record, by any means, but when we consider the relative frequency of genital to extra-genital chancres, and the proportion between the latter and chancre of the hard palate, the rarity of the last immediately becomes apparent.

A word as to the manner in which the initial lesions were acquired. The statements of the patient in regard to the abrasion caused by the pipe were not elicited by any questions. That in regard to others using it was obtained by an interrogatory. The entire demeanor of the patient and his general appearance, as well as his reputation for honesty, were such as to dispel any faint suspicion that might have been entertained that he was addicted to vicious habits.

4 The Pathology and Treatment of Venereal Diseases, by Bumstead and Taylor, 1883.

5 Vratsch, 1886, Nos. 23, 24.

6 De la fréquence relative des différentes variétés de chancres syphilitiques extra-génitaux. Thèse de Paris, 1887.

7 Annales de Dermatologie et de Syphiligraphie, June, 1888.

1 Astruc. Traite des Maladies Veneriennes, vol. 1.

2 Nouveau Traite des Maladies Veneriennes par M. Robert.

3 Photographic Illustrations of Cutaneous Syphilis, by G. H. Fox, 1881.

The fact, also, that he did not have even the remotest suspicion of the trouble with which he was affected is corroborative evidence. There can be no doubt whatever of the possibility of the manner of inoculation mentioned. The probability is also strong in this case, at least as strong as in those cases of chancre of the lip, due to smoking a cigar, which cases have been accepted without a doubt being raised in regard to the manner in which inoculation occurred. Furthermore, the patient had not seen a dentist, nor had any instrument whatever been used in his oral cavity. On the whole, therefore, I think that I am justified in concluding that the inoculation occurred in the manner specified above.

AN IMPROVED

BOUGIE.

At a recent meeting of the Louisville Medical Society Dr. E. R.

Palmer exhibited an improved urethral bougie. The instrument is the old French soft rubber, olive tipped bougie loaded with bird shot. This greatly increases its weight and gives to it a very desirable vermiform motion, while it does not increase its size or impair its flexibility. The loading of the instrument is very simple and can be easily done by either the surgeon or instrument maker. Simply unscrew the ivory tip and fill the bougie with shot to suit the caliber of instrument. Dr. Palmer does not claim the invention as his own. He said it was the suggestion of Dr. Ultzmann of Vienna. He spoke very highly of its use, especially in cases of spasmodic stricture of the deep urethra. There can be no doubt that the patient is often damaged by the attempt to pass hard bougies and catheters even in the hands of men with considerable experience. With the loaded soft rubber bougie it is almost impossible to make a false passage, while its weight is sufficient to dilate spasmodic or even organic strictures of large caliber.

EYE EAR, AND THROAT.

SYPHILIS OF THE LARYNX, TRACHEA AND BRONCHI.

BY

J. SOLIS COHEN,

M. D.

Read to the Philadelphia
County Medical Society,
Stated Meeting, Sep-
tember 12, 1888.

Syphilitic processes are among the most important morbid processes affecting the larynx and trachea. Not only do they injure the structural integrity of the organs directly; but, by their location in the regions occupied by the origin and course of nerve

supply, they lead to denutrition of the tissues generally, and to serious motor impairments of the muscles of the larynx. So varied are the manifestations of syphilis, and so important to the welfare of the patient their timely recognition, that considerable detail is proper in their elucidation. In hardly any other department of living pathology has the laryngoscope been of more signal service than in dispelling obscurities in the conception and comprehension of syphilitic disease of the larynx.

The distinctions between secondary and tertiary syphilis,, as manifested in the upper air-passages, are so irregular and uncertain, that many writers prefer the terms recent and tardy. In fact, however, secondary lesions are sometimes tardy and tertiary lesions sometimes precocious. Secondary lesions are sometimes present, as the sole manifestation of that period. Sometimes they precede cutaneous manifestations. Most frequently they occur in subjects already affected with what are known as mucous patches in other portions of the mucous membrane or with early cutaneous syphilides.

Pathology.—The earliest and far most frequent manifestations are subacute and diffusely hyperæmic conditions of portions of the mucous membrane, of varied extent and intensity; an erythema with turgescence, but without hypersecretion, occurring within six to ten weeks after infection. The af-

fectured surface exhibits at first the usual rose-color of congestion, but, as stases, infiltrations, and hæmic transudations occur, it becomes more or less livid in patches which present mottled or flaky discolorations. Superficial erosions often ensue. Occasionally, deep-seated ulceration occurs. Sometimes paresis of the muscles of the larynx is produced. The erosions may be due simply to denutrition of epithelium from mere pressure by infiltrations; or to disintegration of a characteristic proliferative lesion known as the papule or mucous patch, by some termed broad condyloma, a product, according to Virchow, of the same histological character as the indurated chancre and the various gummous formations, namely, an infiltration of tissue with nucleated embryonic cells. These papules are characteristic, but by no means frequent syphilitic products in the larynx; and are so infrequent in the trachea that their occurrence there is denied by authorities the very highest. They are multiple recurrent lesions, almost invariably associated with mucous patches on other mucous membranes; usually lasting from three to five weeks, and sometimes much longer. They are observed from within a few weeks to a few months after infection; sometimes earlier, occasionally as late as eighteen months. They are far the more frequent in tuberculous subjects who have contracted syphilis.

The opinion is held by some that superficial ulceration is always due to their disintegration; and that they must have existed in many cases in which they have been observed. Histologically they are composed of small-celled infiltrations into the corium and into dilated hypertrophied papillæ. Hence they occur in localities where papillæ exist. Consequently they cannot occur below the vocal bands. They are quite red when recent, but soon change to light gray as the epithelium thickens; they may appear as small, wrinkled, opalescent, flattish, ovoidal, elevations, varying in size from pin-heads to small peas; depressed in the

centre when mature, and when recent circumscribed with a peripheric inflammatory areola. They may subside without trace. When erosion takes place, the surface becomes punctately red from exposure of the papillæ. They may undergo destructive ulceration. They may become starting-points of small pointed vegetations, histologically identical with papillomata. These are probably non-specific in character, though due to irritation excited by specific processes. They do not undergo ulceration, and rarely undergo absorption under specific medication. When forcibly removed, they repullulate quickly. Similar vegetations sometimes project from the edges of the ulcerated patches of tissue. Though usually small, sessile, and multiple, they may acquire such bulk as to interfere seriously with respiration.

The erosions which occur on the surface of the papules or upon simply erythematous mucous membrane are usually superficial, but may extend through the mucous membrane and beneath it, under bad hygienic conditions. Under slight provocative exposures to cold and wet, fluxionary œdema sometimes takes place in their vicinity, occasionally to such an extent as to be menacing to life. The epiglottis often becomes very much thickened; the vocal bands thickened and dentatedly eroded. There seems to be no tendency for secondary lesions to extend from the larynx to the trachea.

Tertiary lesions come under notice most frequently in the stage of ulceration, usually following the liquefaction of gummous nodules, gummous infiltrations, or true gummata, as may be. The epiglottis is the most frequent seat; so frequent, that its lingual and lateral ulceration has been erroneously deemed pathognomonic of syphilis; but destructive lesions may occur in every portion of the larynx. The ulceration is both serpiginous and deep-seated, and while more commonly unilateral, there seems practically to be little limit to its phagedenic

destructive ravages under favorable conditions, as it destroys and penetrates all the tissues, soft and cartilaginous. Slight provocation may produce fluxionary œdema in this stage also, which may be of the most serious character. Serious hemorrhages may occur from penetration of bloodvessels: and apnœa may ensue from incarceration of fragments of necrosed cartilages and soft tissues. Ulceration may be attended with proliferative vegetations which may occlude the air-passages. Superficial ulceration may heal with moderate cicatrization which eventually becomes hardly noticeable. Deep and extensive ulcerations heal under peculiar, whitish, lustrous, stellate, retractile cicatrices, similar to those which follow burns. Instead of cicatrization, adhesions may take place between contiguous raw surfaces, and strictures of various kinds be formed in consequence.

The gummous lesions preceding these ulcerations are of three kinds: small gummous multiple nodules or nodular syphilides; diffuse gummous infiltration; the gummata proper, usually isolated.

Small gummous nodules (nodular syphilide, Lewin) vary in size from that of small bird-shot to that of peas, and are usually grouped in well-defined determinate figures in the body of the mucous membrane, and often so contiguous as to appear confluent. Gummata proper, present as firm hemispherical nodules or tumors, from the size of peas to that of cherries or almonds, and sometimes larger, in the connective tissue beneath the mucous membrane; usually uniform in outline, sometimes lobulated; undiscolored or reddish at the base and yellowish at the summit. Gummous infiltrations present as more or less longitudinal or more diffuse submucous thickenings corrugating the surface of the mucous membrane. All these products may undergo absorption.

When not absorbed, gummous nodules undergo purulent liquefaction. At this time they become softer and more yellowish at the summit, the mucous membrane

at the base becoming more inflamed and thickened, the whole mass looking not unlike a furuncle. The summit becomes perforated, and gives exit to thickened, yellow pus, with granular admixture of debris at first. The orifice rapidly enlarges by ulceration until it becomes fully as large in circumference as the nodule was, or larger; and readily coalesces with ulcerations from contiguous nodules. The ulceration extends in depth until it occupies the entire volume of the nodules, and then may penetrate all the tissue beneath, even to the perichondrium and cartilage.

The ulceration of the nodulous syphilide, as studied in a series of cases by Lewin, is said to take place more from periphery to centre than the reverse, being shallow at first, and then gradually deepening. The ulcer is round, depressed, and sharply bordered. Its bed is covered with a secretion which, from previous fatty degeneration, or purulent metamorphosis, is either thickish, or nearly lardaceous, or composed of purulent detritus.

The more longitudinal, and the diffuser gummous infiltrations undergo liquefactive ulceration much more slowly; but the subsequent ulceration, when unchecked, extends much more rapidly, and becomes more readily serpiginous and phagedenic; so that, coalescing with similar conditions in the vicinity, large surfaces in continuity become involved in its ravages. As it extends in superficies it penetrates slowly in depth until it also involves the deeper structures close to the perichondrium, and sometimes to the cartilage. Ulceration varies in rapidity, penetration and extent, according to the succulence or resistance of the tissues contiguous. The ulceration from diffuse gummous infiltration is preceded, according to Lewin, by extensive fatty degeneration of its surface, which gives it an almost grayish-white tinge. This is soon followed by actual defects which, at first shallow, increase in depth, and gradually penetrate to the perichondrium and the cartilage.

These ulcers are characterized, like those from the nodules, by sharp definite circumscription, and by their being surrounded with an inflammatory swollen zone. They appear often as though a piece of swollen tissue had been cut out. The edges are often beset with slight crenations, which give them a gnawed appearance, but are never undermined; and their bottom is covered with a yellowish-white adherent mass, composed of pus, fatty detritus, and shreds of tissue. Gummata proper sometimes remain unchanged for prolonged periods. When they undergo degenerative metamorphosis there is formed, according to Lewin, only the characteristic viscid fluid, suppuration being exceptional. Ulceration takes place, however, in some instances, and penetrates deeply into the tissues beneath, as in the other two forms. Under favorable hygienic conditions of system, or of surroundings, the phagedenic ravages may become uncontrollable. They have been known to attack an artificial opening made to prevent suffocation by a gumma (Holden, *New York Medical Journal*, January 29, 1887).

Perichondritis and chondritis being set up after either form, the ulceration may penetrate the cartilage to the tissues external, forming a perichondrial abscess, which ruptures externally by a more or less circuitous route, whence the fragments of dead tissues are discharged.

Taken in point of frequency the cartilaginous structures seem to be vulnerable in the order following: epiglottis, posterior vocal processes, arytenoids, supra-arytenoids, cricoid, cuneiform, and thyroid. Coming to the softer parts, the vocal bands are attacked next in frequency to the epiglottis, the left band far more frequently than the right; the interior supraglottic walls of the larynx, the aryepiglottic folds, the interarytenoid fold, the posterior wall, the ventricular bands, the subglottic walls of the larynx, the exterior of the soft parts in the pyriform sinus. When the cartilages are attacked,

whether primitively or consecutively, the chain of morbid phenomena is perichondritis, chondritis, calcification, caries, necrosis, and elimination of sequestra in crumbled masses and in fragments. The elimination of dead cartilages may consume months, and even years. It usually takes place by the interior route, occasionally by the exterior. In both instances abscess and fistula are formed, and elimination of large fragments by the interior route sometimes produces suffocative paroxysms, and occasionally actual suffocation.

The epiglottis, as repeatedly noted, is vulnerable to the syphilitic process, and every variety of lesion possible may ensue in any extent, from insignificant erosion to complete destruction, the character of the lesion depending upon that of the structure destroyed. It is this, as pointed out by Seiler, which gives such an irregular conformation to the epiglottis when its glands have been destroyed.

Exulceration of the entire mucous membrane at the edge reveals the exposed cartilaginous structure as a yellowish white stripe embedded between two thickened masses of spongy-looking tissue. Ulceration of the cartilage often commences at the anterior surface in the form of a round ulcer with thickened excavated edges. Destructive ulceration usually progresses from the side and from the edge. When the valve is only partially destroyed, its remains may present two or more irregular fragments separated by fissures of varying depth, or a single fragment of any breadth, from a small stripe to nearly an entire bulk.

When totally destroyed the orifice of the larynx is separated from the post-lingual sulcus by a more or less irregular ridge of ulcerated tissue, which, after cicatrization, presents as a pale, deformed stump. This, however, does not, as a rule, prevent gluttony, and in some instances does not interfere with it; the occlusion of the larynx being effected by the base of the tongue, on the one hand, and by close approximation

of the ventricular bands and sphincter-like approximation of the aryepiglottic folds, on the other.

The other cartilages, when the subject of destructive progressive ulceration, are macerated, out of their investments, as it were. The ulcerative process extends into the cartilage, surrounding it, if a small one, or circumscribing a portion of it, if it be a large one. The cartilage then perishes by necrosis, is laid bare, and becomes detached from its connections, in some instances remaining entangled in a sort of pocket scooped out of the soft tissues. The necrosed cartilage finally breaks through to the interior, and is usually discharged by expectoration. If it be situated below the glottis, paroxysms of suffocation may ensue, or even actual apnoea, as from any other foreign body. Exfoliations of the cricoid cartilage are the most frequent source of these untoward results, which, however, sometimes ensue from exfoliations of the thyroid.

The ulcerative process sometimes penetrates bloodvessels and hemorrhage follows. Such hemorrhage has been known to terminate fatally (Turck, *Op. cit.*, p. 413, illustrated).

The vocal bands frequently sustain permanent lesion varying from minute losses of substance to entire destruction. Transversal dentated erosion of the border is not uncommon, and detachment from the posterior vocal processes not infrequent. Sometimes abundant irregular papillary proliferations take place, forming mobile, projecting, pyramidal, or irregular denticulate vegetations which project like soft, mobile stalactites into the interior, and which are large enough, in exceptional instances, to demand operative interference. Similar conditions and productions may prevail with the ventricular bands. Superficial ulcerations may heal with moderate cicatrization, which eventually becomes hardly noticeable. In deep and extensive ulcerations, when cicatrization occurs, a peculiar

lustrous, whitish, stellate, contractile cicatrix is formed, similar to the syphilitic cicatrix in other mucous membranes. Instead of cicatrization, adhesions often take place between ulcerated surfaces, and thus a variety of injurious morbid conditions occur. The vocal bands may become united by a broad fibrinous band stretching between them, or by a similar obturator, formed of their thickened and distended mucous membrane. The membranous web, thus formed between the vocal bands, usually unites them for a variable distance, commencing at the commissure; the posterior border of the structure being crescentic in outline. Exceptionally the cords may become involved their entire length, with an orifice in the central portion of the web (Navratil).

This membranous union has been known to take place in six days (Rossbach: *Langenbeck Archives*, vol. xiv.). In a case watched by Sommerbrodt (*Berlin. klin. Woch.*, April 1, 1878), the anterior third united in fourteen days, and the union of the bands was complete in six weeks. In other cases the vocal bands became united without any membrane intervention.

Other adhesions sometimes take place, which may seriously impair gluttony, phonation, and even respiration. These comprise depression of the epiglottis to one side or the other, or to an aryepiglottic fold, and preventing proper closure of the valve or complete elevation; adhesion of the epiglottis to either lateral pharyngeal wall; adhesion of ventricular to vocal band, sometimes preventing closure of the glottis, and often producing a shrill, weak, piping voice; adhesions anteriorly of the two vocal bands, or of the two ventricular bands; adhesions of the inner surfaces of the mucous membrane of the arytenoid cartilages, so as to fix the vocal bands immovably in the median position. Other results of syphilitic laryngitis are hypertrophies, diffuse and discrete, of mucous membrane, connective tissues, or muscular substance, and consequent stricture, varying in extent, locality, and

interference with function; myopathic paralysis; muscular atrophy, and the development of morbid growths.

Perichondritis or chondritis, whether following ulcerative destruction of the soft tissues or preceding it, usually excites considerable fibrinous infiltration into the adjacent submucous connective tissue, producing a chronic fibrinous œdema. When extensive, this produces suffocative symptoms, and may threaten asphyxia. Sometimes the submucous infiltrations become organized and transformed into dense fibrous tissues incapable of undergoing absorption, and thus they produce deformity, occlusion of the larynx, and stricture. The strictures are often incapable of yielding to systematic dilatation, even when instituted early; and hence tracheotomy is usually necessary to provide artificial means for respiration below the seat of obstruction. After tracheotomy, the process may progress to complete obliteration.

These strictures are of the most varying form and calibre, some of them distorting the configuration of the interior of the larynx almost out of recognition. Fortunately, most of them occur in the supraglottic region, where they are far more accessible to effective treatment.

Lesions of either soft tissues or cartilage in the neighborhood of the important crico-arytenoid articulations excite non-specific inflammation of the joint which may produce true or false ankylosis. Syphilis is probably the most frequent cause of this lesion. When the specific process invades the joint, the ligaments and perichondrium suffer, and true ankylosis, or luxation, or disarticulation, and even discharge of the arytenoid and supra-arytenoid cartilages may ensue.

In the latter stage of unrestrained lesion, the cachexia is much the same as in analogous advanced stages of tuberculosis.

Myopathic paralysis of the muscles of the larynx may occur in the later periods of secondary syphilis, and at any period of

tertiary syphilis. They are most frequently unilateral, the left side being affected far oftener than the right. The onset is often sudden or acute, following severe or sudden exposure to cold and dampness. The paralysis often affects the dilator muscles, and bilateral paralysis of the dilators is not infrequent. Paralysis of the arytenoid muscle and of the entire constrictor group are the most frequent varieties. These paralyses differ in their pathological origin from other examples of paralysis in syphilis, which are due, respectively, to compression of the tract of the nerve-supply by diseased tracheo-bronchial glands or other structure, and to neural or cerebral lesions which present in the latter stages of the confirmed dyscrasia.

Tertiary lesions of the trachea are first observed so very frequently in the stage of ulceration, that it had been assumed that tertiary syphilis of the trachea always produces ulceration (Vierling). Schech and others have reported instances of resorption of gummata under specific medication. The clinical tendency, however, is to ulceration. Tracheal ulcerative lesions are sometimes unassociated with lesions elsewhere in the aërial tract. Much more commonly they are found associated with similar lesions in the larynx, in the bronchi, or in both.

Pharyngeal syphilis exists in many instances (thirty out of forty-six, collated by Vierling), and pulmonary syphilis in not a few (six out of fifty, Schech). They are often found associated with additional syphilitic lesions at a distance. In a large proportion of instances a primitive bronchus is affected, the left one the more frequently; in some, both primitive bronchi; in a few, the smaller ramifications (Vierling); and, exceptionally, even the minutest (Lancereaux). In some instances syphilitic lesion is confined to the bronchi (five cases, by Vierling). The upper portion of the trachea suffers most when the larynx is involved; the lower portion, when the disease is isolated or associated with syphilis of the bronchi. In some instances the middle

portion alone suffers (Vigla and Charnal, Berger, Mackenzie, of Baltimore, Semon); exceptionally, the two extremities, with complete conservation of the middle portion (Tessier, cited by Rey).

When not occurring in direct continuity with similar lesion in the larynx, the most frequent seat of ulceration is in the anterior surface of the lower portion of the trachea just above the bifurcation whence it extends upward, or in patches continuously sometimes as far as the cricoid cartilage; sometimes almost completely around the interior in periphery, occasionally completely around. Multiple perichondritis is easily set up and results in abscess, denudation of cartilage, calcification, caries, and necrosis. Portions of dead cartilage are sometimes coughed up in fragments. Sometimes semi-detached portions project into the interior and interfere seriously with respiration and with expectoration. The ulceration usually begins in a number of small ulcers which extend in depth and in periphery, baring the perichondrium, and causing portions of cartilaginous rings, or entire rings to undergo denudation, necrosis, and exfoliation. Coalescence with similar ulcerating surfaces, or phagedenic extension sometimes produces very extensive ravages which may involve nearly the entire circumference of the trachea, and nearly, occasionally quite, its entire length. Flaps of detached membrane sometime fall over, producing valvular impediments to inspiration, or to expiration, according to the position of the attachments. The cicatrization of annular ulcerations produces stricture often so low down as to be beyond relief even from tracheotomy, the parts not being well adapted to respond to artificial dilatation. The strictures are irregularly ovoidal in shape, sometimes funnel-shaped, and of varying thickness from a few lines to that of several rings.

These cicatrices may reduce the calibre of the trachea so considerably as to prevent respiration. Occlusion to the calibre of a crowquill is not uncommon, and still greater

occlusion has been noted in some instances. Annular stricture at the bifurcation may become so great as barely to admit the passage of a delicate probe. (Obtulowicz: *Cent. f. Chir.*, 1879, No. 7.)

Irregular annular dilatation of the trachea is often produced by the pressure of the air current above the stricture and sometimes below it. Even dilatation of the bronchi has been noticed.

Projecting ridges of cicatricial tissue below the point of stricture are sometimes so located as to occlude the inferior orifice of a tracheal canula more or less, a point not sufficiently recognized, for it might be practicable in some instances to push a canula into a position which would allow its inferior extremity to pass the obstruction.

Stricture of the bronchi is rare. It affects the left bronchus more frequently (Verneuel, *et al.*); sometimes the right one (Wilks, *et al.*); occasionally both (Virchow, *et al.*). The connective tissue around the strictured portions usually undergoes permanent sclerotic proliferation. Sometimes there is great peritracheal sclerosis, sometimes none. The peritracheal glands may undergo great enlargement. All these conditions superadded to the internal stricture, may greatly increase stenosis.

Ulceration sometimes penetrates through the trachea producing abscess opening into the œsophagus or the mediastinum, the aorta (Rokitansky: (*Path. An.*, Bd. III, p. 22; Wilks: *Trans. Path. Soc.*, London, 1865, p. 52), the pulmonary artery (Kelly: *Id.*, 1872, p. 45), or the vena cava (Turner: *Id.*, xxxvii. p. 117.) In at least two instances of ulceration of the left bronchus, the left branch of the pulmonary artery has been found perforated. (Vierling).

Inflammation around the trachea or bronchi sometimes produces adhesions to œsophagus or to other tissues, which depresses the trachea and larynx and impairs their upward movements in glutition. Sometimes it produces peritracheal or tracheo-bronchial abscess. Abscess of a

bronchus, sometimes deeply seated, has occurred after tracheotomy, apparently as a result of too assiduous swabbing of the canula.

The lesions of hereditary syphilis are almost identical with those of the gummous infiltrations of tertiary syphilis. They sometimes appear very early. Ulcerations have been noticed in infants at two months of age (Parrot: *Prog. Méd.*, 1878, p. 653). Stricture from perichondritis has been noticed at the same age (Fränkel: *Wien. med. Woch.*, 1868, No. 18; Parrot: loc. cit.).

Symptomatology—The laryngeal symptoms of secondary syphilis are not characteristic. They are chiefly comprised in dissonant alterations of the voice, either hoarseness, dysphonia, and in some cases occasional or temporary aphonia. The hoarseness is supposed to have some peculiarity which has been termed *raucedo syphilitica*, but this is not the case. In some instances it is simply due to the catarrhal laryngitis, in others to paresis of one or more of the constrictor muscles, or possibly to paralysis of the tensors. Respiration is not affected except in those instances in which œdema occurs in such a position as to occlude the passage for air, when it will be announced by dyspnœa and stridulous respiration, the characteristic symptoms of that condition. Titillation and cough are not as frequent as in inflammations of other origin. In many instances there is no tickling and no cough, no pain and no dysphagia.

Dysphagia is not present unless there be œdema of the parts utilized or pressed upon in glutition.

In tertiary syphilis of the larynx the symptoms are usually those of impairment of phonation, followed in severe cases by dyspnœa and stridor also, chiefly inspiratory. The stridor is worse at night from inaction of the auxiliary muscles of respiration. Should the mechanical impediment to respiration increase, inspiratory depression of the soft parts below the sternum takes place. If relief is not obtained,

artificially or otherwise, asphyxia supervenes from imperfect aëration of the blood. Suffocation may occur suddenly from impaction of detached cartilage; but it is more frequently slow enough in its approaches to allow time for tracheotomy.

Titillation and cough are more frequent in the earlier stages than in secondary syphilis; but they diminish after ulceration has taken place, except in so far as they are produced from time to time by morbid products detained upon diseased and adjacent surfaces. Pain is infrequent before the period of ulceration; after that it may be severe, and radiate into the ears as in other ulcerative diseases. In the early stage there is no expectoration. The earliest expectoration is of collateral catarrhal products only. As ulceration progresses it becomes muco-purulent and then purulent and sanguineo-purulent, and mixed with detritus according to the stage and location of the lesion.

If gangrene takes place the odor becomes fetid, and the expectoration contains fragments of dead soft and cartilaginous tissue, as may be.

Dysphagia ensues when the disease is in a locality to interfere with glutition, and odynphagia when ulcerations have occurred in the same localities.

In tertiary syphilis of the trachea the symptoms affect mainly the function of respiration, the voice often remaining normal even when breathing is seriously embarrassed.

Pain along the course of the trachea, if constant, is indicative of lesion at that particular point. Cases may run their entire course without any special symptom, even in the presence of stricture of the trachea, and of the bronchi, and of extensive disorganization as revealed at the post-mortem examination.

In hereditary syphilis, the symptoms are sometimes congenital and may remain practically continuous for years. Respiration and phonation are both affected. The

cry of the infant sometimes possesses a shrill metallic resonance which has been compared to that of a tin trumpet. Cough is more frequent in the child than in the adult. Gluttony is often difficult and sometimes painful. Expectoration occurs in the suppurative stages when the child is old enough to expel the products, which by infants are swallowed or retained in the air-passages. Laryngismus is a symptom of frequent occurrence in young children

Etiology.—The probable condition attracting the manifestation of constitutional syphilis to the larynx is superficial catarrhal laryngitis from hereditary or acquired proclivity, or from exposure, or from abuse of tobacco, alcohol, or other indulgence, or from misuse of the voice. Such exposures cause more males to be affected than females, as there is no assignable sexual reason for preponderance. Tracheal lesions, on the other hand, have been reported more frequently in females, probably because the laryngeal lesion is attended to more promptly by the male. Syphilitic disease often extends by continuity from the oropharyngeal region to the larynx, principally along the pharyngo-epiglottic fold to the epiglottis, and thence along the aryteno-epiglottic fold, and from the two structures to the interior. Hereditary syphilis has been observed in intrauterine life (Monti: *Med. Times*, Phila., April 28, 1877, p. 336.). Hereditary syphilis of the intensest character has been occasionally observed at a very early age, as in the case of an infant whose symptoms began with coryza in the tenth week of life, and terminated in death by suffocation from stenosis nineteen days later. Post-mortem, with examination, revealed, in addition to syphilitic lesions in the liver, destructive perichondritis of cricoid and left arytenoid cartilage, and fatty degeneration of arytenoid and both posterior crico-arytenoid muscles and the left superior nerve (Fränkel: *Wien. med. Woch.*, 1868, Nos. 69, 70, cited by Ziemssen and by Mackenzie). Children

less than a year of age often show laryngeal lesions of hereditary syphilis, and ulcerative lesions have been seen at two months of age (Parrot: *Prog. Méd.*, 1878, p. 635). Many cases occur in children but a few years of age, and sometimes the manifestations are deferred to the period of puberty or even later. Indeed, in opposition to the received opinion of syphilographers, I have reason to believe that in a few instances I have seen its manifestations delayed as late as the third and even the fourth decennium. True, in such instances as the latter it is quite possible that infection may have been acquired in some method unknown, without having been followed by any secondary manifestations, or that early hereditary manifestations may have escaped recognition. The secondary manifestations occur most frequently in adolescents and young adults. They appear most frequently at periods varying from a few weeks to a few months after infection, sometimes as late as the fourteenth or seventeenth month (Morgan). Tertiary lesions are most frequent at rather maturer ages, and occur occasionally in quite advanced life. They have been reported as early as the sixteenth month (Türck, op. cit.), and as late in their first appearance as the thirtieth (Türck), and even the fiftieth year (Mackenzie). Tracheo-bronchial tertiary lesions have been reported as appearing as early as the ninth month after infection, but these lesions are usually coincident with the laryngeal lesions when not immediately consecutive to them.

Most of the instances of tracheal syphilis occur in individuals whose employments expose them to irritation from dusts of various kinds (Vierling: *Deutsches Arch. f. klin. Med.*, 1878, Bd. 21.) Hereditary tracheo-bronchial syphilis is far less frequent than the laryngeal forms. It has been observed before the age of puberty.

Diagnosis.—Differential diagnosis between secondary and tertiary lesion is sometimes difficult, particularly in the transition-

ary period especially described by Whistler. The discriminating characteristics are less well marked in the laryngeal syphilis, perhaps, than in any other variety.

It may, however, be broadly stated that secondary lesions, erythematous, papular, condylomatous, or paralytic, are superficial; and that tertiary lesions are gummatous, ulcerous, carious, necrotic, and deep seated. Laryngitis occurring within a few months of infection, is almost invariably secondary. Lesions appearing before the termination of the third year are presumptive secondary: those appearing within the third year, secondary, or transitional: and those appearing after the termination of the third year, tertiary. Nevertheless, secondary lesions may be ulcerous, and undoubted tertiary manifestations have been recognized even within nine months of infection.

The history of the case, and the previous or actual presence of manifestations of syphilis elsewhere, are the main positive factors in the diagnosis of specificity, especially in the early stages of either variety. The later lesions of tertiary syphilis are often sufficiently characteristic; sometimes not at all so. In cases of doubt, antisyphilitic treatment will almost always detect a lesion of syphilitic origin, but not invariably. Hence, in instances of strong suspicion, the various methods of antisyphilitic medication should be thoroughly tried before the test is abandoned. This suspicion is justifiable in cases of obstinate chronic laryngitis, whether ulcerative or not, in individuals in whom no other appreciable local or constitutional cause can be detected.

Laryngoscopic inspection is an invaluable aid in diagnosis; though practically indispensable, it is inadequate for fully appreciating the extent of deeply seated lesions; and its revelations are not always sufficient to establish the diagnosis in the absence of corroborative lesions elsewhere. Erythematous and catarrhal inflammation of secondary syphilis, when diffuse, are not to the

ordinary eye distinguishable from similar non-specific conditions. Circumscribed erythema, though usual in syphilis, occurs in non-specific laryngitis also, consequently that condition alone is insufficient for discrimination. Patchy erythema on the vocal bands, and elsewhere, may be regarded as characteristic. Not so, however, the shaded pigmentations at the extremities of the vocal bands.

Symmetric bilateral localization of erythematous and other patches is highly characteristic of secondary syphilis; but a contrary condition by no means excludes the diagnosis. Isolated bilateral congestions of the supra-arytenoid structures and of the Wrisbergii has been cited as pathognomonic. Nothing can be more fallacious or misleading. Enlarged inguinal and post-cervical glands furnish excellent corroborative testimony of syphilis.

Papules, or condylomata, upon an erythematous mucous membrane, are to be considered pathognomonic. Their recognition may require an exceptionally good light on the one hand, or repeated examinations on the other. They must be carefully discriminated from minute collections of mucus or of saliva.

Diffuse gummous infiltration is to be distinguished first from inflammatory syphilitic infiltration by the co-existence of gummous processes elsewhere, its more circumscribed contour, and its sharper definition. Differential diagnosis is much easier after it has reached the stages of liquefaction and ulceration.

Syphilitic ulceration usually proceeds from above downward, rarely in the opposite direction, and often in extension from ulceration in the pharynx. Repair usually proceeds from below upward. Apart from these guides there is nothing positively characteristic enough to determine an ulceration to be syphilitic in character by mere inspection.

The absence of pain has been regarded as characteristic, but, on the one hand,

carcinomatous ulceration often exists without pain, and on the other hand, the ulcerative lesions of syphilis are sometimes attended with lancinating pains of the most severe character.

In the gummatous stage of tertiary syphilis diagnosis is not difficult. Nodular syphilides and gummata are recognized in the forms and at the localities mentioned under pathology, page—. They may be confounded with other neoplasms, and with abscess. In cases of doubt, antisyphilitic treatment should clear up the diagnosis. The physical distinction between gummata and condylomata may in some instances be obscure (Semon).

The main reason why gummata are so infrequently seen, as to have led some observers to an erroneous opinion as to their rarity, is that many patients do not present themselves until after the stages of liquefaction and ulceration have become established. When this stage has not been observed, and the larynx, as is more usual, is not inspected until after ulceration has considerably progressed, the appearances are not always characteristic. They may be confounded with those of lupus, carcinoma and tuberculosis. The general diathesis, the clinical history, the existence of enlarged submaxillary, and post-cervical lymphatic glands, the character of concomitant affections of the skin and mucous membrane, the aspect of the patient, assist in discrimination. Sometimes, too, tuberculous and syphilitic lesions coexist.

The typical tertiary ulcer, sharply defined, and below the surface of the mucous membrane, is more or less circular when recent, more or less crenated when reparation is taking place at one or more points of the circumference, and looking as though cut out with a punch when in œdematous tissues. Its borders, are sharp, elevated, but not often undermined, and more or less rounded in their visible outline, and are surrounded by a more or less circumscribed inflammatory areola in the mucous mem-

brane. The bottom feels hard to the probe on palpation. The bed of the ulcer is grayish, or lardaceous, yellow from fatty detritus, and covered with adherent concrete pus, through which, here and there, prominent rosy granulations often project. The surrounding tumefaction is harder and more indurated than in other varieties of ulcer. Purulent accumulations are rather indicative of the syphilitic process. At a later date denuded or necrosed cartilage may be visible in suitably located ulcers.

In cases in which neoplasms have become developed at the seat of existing ulcerations, or of cicatrized ulcerations or erosions, it is often impossible to pronounce as to their nature, even by the test of antisyphilitic treatment. Not only do such neoplasms exist independently of the syphilitic process, or as the result of irritation provoked by syphilitic process in the vicinity; but when undoubtedly syphilitic in origin, they rarely disappear under specific medication. Tertiary syphilis is usually recognizable in the stages of œdema of the larynx; and almost always in the reparative stages of cicatrizations, or in the subsequent stages of stenosis, whether from cicatricial retraction or from organization of effused products.

Prognosis.—Secondary lesions, even when ulcerative, are most frequently curable without cicatrix or without any other sequel. Exulceration of the vocal bands sometimes leaves permanent defect of tissue. The prognosis is good except during temporary conditions of œdema, when it may be grave for the time being. The inflammatory congestion and turgescence is more chronic than in catarrhal inflammations, and are often recurrent. Actual hyperplasia is apt to remain permanent, even after cure of the syphilitic lesion, despite the most assiduous treatment and when it occupies a vocal band the voice may be permanently impaired. The singing voice may remain imperfect, although the conversational voice be fully restored; the injured tissues being

unequal to the nicety of adjustment requisite for cantation.

In tertiary lesions the prognosis depends mainly on two factors: First, on the impairment of the general health, and the significance of lesions elsewhere, especially in the brain and meninges, and in other important organs. Second, in the extent of ulceration and the character of deformation or stricture which may follow. Temporary gravity exists in the presence of œdema; during the period of exfoliation of necrosed cartilages, and in acute bilateral paralysis of the dilator muscle, the result of exposure to cold or other cause, or to unilateral paralysis when the opposite side is immovable from gumma, or from crico-arytenoid ankylosis (Charazac: *Rev. Mens. de Lar.*, Sept. 1884), any of which conditions may demand prompt tracheotomy to prevent death by suffocation. Ulcerative lesion of the trachea may be fatal by hemorrhage from penetration of large blood vessels; by pneumonia from access of food through perforation of œsophagus (Berger); or by septic processes due to rupture of the mediastinum. Permanent impairment of the voice is to be expected in all cases in which the vocal bands undergo serious injury, and in many in which permanent changes are likely to take place in other structures contiguous to the glottis.

Gluttony is rarely affected, even after complete destruction of the epiglottis; and in exceptional cases difficulty is mainly confined to fluids swallowed without deliberation.

Stricture rapidly supervening upon hyperplasias is often amenable to active treatment, sometimes with striking rapidity (Krishaber: *loc. cit.*); but the more frequent stricture of slow progression can only exceptionally be brought under control.

Serious danger attends even cure of extensive ulcerative lesions in the interior of the larynx, for the resulting stricture, if severe, is likely to necessitate tracheotomy, with great probability of permanent retention of

a canula. It is rarely amenable even to excision of cicatricial tissue by external access. Subglottic stricture is much more serious than supraglottic, and tracheal far more serious than laryngeal stricture. Stricture of the trachea, when low down, is practically insusceptible of amelioration; and death by slow apnœa, or by sudden suffocation, is the usual outcome.

When the syphilitic cachexia has advanced so far as to have produced incurable lesions in important viscera or in the cerebrum, death may ensue from these causes despite sustained cure of syphilitic lesions in the larynx. In cases complicated with paralysis of the dilator muscles of the larynx from cerebral lesion, the death may take place by occlusion of the glottis and suffocation, or by encephalitis and coma.

In hereditary syphilis the prognosis is very much the same as in tertiary syphilis; being much worse in infancy and childhood than in more delayed manifestations. The small size of the larynx renders stricture and intercurrent œdema far more significant; and the tendency to spasm of the larynx inherent to all laryngeal affections in childhood presents an additional element of danger. Fatal issues from these three causes are not infrequent. An element of uncertainty as to the final result remains in all varieties of syphilis of the larynx and trachea, due to the fact that permanent liability to recurrence prevails in many instances, despite the best apparent results of the most judicious treatment; and often, too, after prolonged intervals of immunity from any further manifestation of constitutional syphilis.

Treatment.—Fortunately, lesions even of great destructive and menacing tendency are amenable, as a rule, to treatment: often promptly.

The treatment, broadly stated, is that applicable to constitutional syphilis in general; mercury in the early manifestations and iodides in the late ones. In many of the latter, if not most, the mixed treatment

combining the two specifics is the most serviceable. In congenital syphilis the gray powder is believed to be the efficacious form of the drug. While willing to admit that secondary lesions often subside without traces and without much risk of subsequent tertiary manifestations, although mercury be withheld, I deem it the more prudent practice, and, therefore, the best practice, to employ mercury; in the belief that its specific constitutional influence affords the patient better protection as to future manifestations. As to the value of iodides in tertiary syphilis, there is no difference of opinion. Tonics are often indicated. All sources of irritation, exposures, excessive use of the voice, alcohol and tobacco, are to be avoided.

Sedative inhalations in vapor or spray are often of great topical benefit in subduing collateral inflammation; and antiseptic inhalations are indicated in gangrenous cases.

Secondary syphilis. Mercury may be administered by the stomach or by the skin. When the lesions are moderately severe or slow in progress, the corrosive chloride may be administered in doses of from one-sixteenth to one-eighth grain, three times a day. The green iodide may be given in doses gradually increased from one-sixth of a grain three times daily to the point of tolerance. The addition of extract of belladonna may cause it to be better borne by the stomach. In individuals in whom serious gastric disturbance is produced before any specific effect has been noted, and in seriously severe cases and cases of rapid progress,unctions of a drachm of mercurial ointment daily are preferable, or pencillings with solutions of oleate of mercury in oleic acid, ten per cent. Lewin prefers hypodermatic injections of corrosive chloride. Concurrent stomatitis is to be combated by the internal administration of potassium chloride, or the use of a saturated solution of that salt, or of a weak solution of potassium permanganate as a mouthwash. It is hardly necessary at the present day to mention that

salivation is to be avoided. In my own experience topical medication is, as a rule, superfluous in non-ulcerative secondary syphilis, and often unnecessary in the presence of ulceration. When topical medication seems necessary, inhalations of sprays of corrosive chloride (Demarquay) half an ounce or more daily of a solution containing one grain to four ounces of water are useful locally and constitutionally. In particularly obstinate conditions, especially in the presence of hyperplasias, the topical applications of solutions of iodine and potassium iodide in glycerine (Schnitzler) half a drachm and a drachm respectively to the ounce, made daily or at longer intervals, sometimes accelerates the cure.

In the transitional stage and in the tertiary stages, the mixed treatment has been the most beneficial in my own practice; one-sixteenth to one-eighth of a grain of the corrosive chloride, five to ten grains of potassium iodide in half an ounce or more of the compound syrup of sarsaparilla, three times a day. It may sometimes be necessary to increase the dose of the iodide up to the point of tolerance. In such cases the "grain to drop" solution is the most convenient preparation. The danger of inducing œdema of the larynx by sudden large doses must not be forgotten. When necessary sodium or ammonium iodide may be substituted for the potassium salt, or hydriodic acid may be employed.

In the presence of œdema, hypodermatic injections of corrosive chloride (Lewin), one-thirtieth of a grain, twice a day for a day or two, and after improvement, at intervals of three days or more, have proved quite efficacious. If amelioration is not prompt, and if the patient cannot be carefully watched by an attendant competent to interfere in an emergency, it is best, in my opinion, to perform prophylactic tracheotomy, instead of awaiting its urgent indication. The same rule is applicable to threatening cases of extensive hyperplasia, whether from specific or non-specific infiltrations.

Nevertheless, remarkably happy results, even in urgent cases of these kinds, have frequently followed active treatment by inunction (Krishaber) and by hypodermatic injection (Lewin). Intubation of the larynx from the mouth (O'Dwyer) has been recommended as applicable in many instances of œdema and constriction heretofore treated by tracheotomy. As yet, I know of no experience with intubation in this special connection.

Ulcerations heal more promptly when the constitutional treatment is seconded by topical cauterizations with fused silver nitrate, or with mercuric nitrate one part to from four to ten of water, or with cupric sulphate in crystal, or saturated solution. Chromic acid, one part in from five to eight of water, has long been extolled (Isambert). Some prefer iodoform (Morgan). On the other hand, extensive ulceration often heals promptly under the influence of constitutional treatment alone.

Vegetations, detached flaps of mucous membrane, semi-detached fragments of necrosed cartilage call for operative removal with cutting forceps, evulsion forceps or snares, as may be most convenient, when these products are so located as to interfere with freedom of respiration or to threaten such interference. When these manipulations are impracticable, tracheotomy may be requisite. When tracheotomy has been performed under any of the conditions mentioned, the canula is to be removed as soon as it has become apparent that its retention is no longer essential to the safety of the patient. Cicatricial stricture of the larynx may be treated by the introduction of the intubation tube through the natural passages (O'Dwyer). This treatment may be applicable to stricture high up in the trachea. Stricture in the middle portion of the trachea require low tracheotomy and the introduction of a tube long enough to reach beyond the constriction. Stricture at the bifurcation is hopeless.

Paralyses, even those of the posterior

crico-arytenoids, are usually amenable to anti-syphilitic treatment even when of considerable standing. This fact seems to indicate that the atrophy found in necrotic paralysis is not due to simple inaction of the muscle, but rather to trophic impairments of neurotic origin. Electrization may be employed when relief does not ensue from systemic medication.

Membranous webs, occluding the glottis from side to side, are divided by incision or by galvano-electric-cautery, the edges cauterized, and readherence prevented, if possible, by frequent introduction of dilating sounds. These laryngoscopic operations are often rendered futile by insurmountable tendency to recicatization, whereby the morbid condition is reproduced. Success in cases of this kind would seem to require exposure of the interior of the larynx by external division of the thyroid cartilage, and excision of the whole of the cicatricial tissue (Mackenzie).¹

When syphilitic laryngitis has existed for a long time, such an amount of destruction may have taken place, and such a degree of systemic poisoning, as to render recovery impossible. The constrictions produced by the cicatrices of extensive ulcers, and the adhesions between adjoining surfaces, in cases that recover, are often such as to render tracheotomy necessary, with the permanent use of the tube; for the constrictions following syphilis are not, as a rule, amenable to dilatation.

Threatened asphyxia or uncontrollable dyspnœa, from gumma, loose cartilage, morbid growth, abscess, or œdema, may necessitate tracheotomy. Tracheotomy for the purpose of conquering dyspnœa due to tumefactions in the larynx is perfectly justifiable, and usually successful. It is likewise justifiable for the mere purpose of securing rest to the organ—much more so indeed, than in analogous conditions attending tuberculosis.

The treatment for local adhesions con-

sists in relieving the tension as far as possible by laryngoscopic division of the constricting bands of tissue, with knife or with electric cautery, and then cauterizing and recauterizing the adjacent surfaces, to prevent fresh adhesions. These cases require careful watching and prompt attention to overcome the disposition to recurrence, which is very apt to take place in spite of all efforts. When the epiglottic is implicated, much good can be done by teaching the patient to move the organ frequently by means of his forefinger.

In a case of stenosis due to "concentric hyperchondrosis," as a result of the hyperplastic chondro-perichondritis, Prof. Heine performed a successful resection of the anterior portion of the thyroid cartilage, splitting that structure in the middle line, separating the perichondrium and superjacent soft tissues, to the distance of one-half its surface on the two sides, with the elevator, and then removing the denuded portions by longitudinal section with bone forceps. The patient rallied so well from the operation that an artificial vocal apparatus could be substituted for the ordinary canula on the fifth day. He became able to resume work after a while; but the disease made new inroads, and he died eleven months later, in an advanced stage of tuberculosis.

Despite the most judicious treatment, and the most satisfactory immediate results, recurrence or recrudescence takes place in many instances at variable intervals, requiring resumption of specific treatment. The most satisfactory results claimed by any writer have been in cases actively treated by Lewin with hypodermatic injections. It is advisable to keep patients under observation for many months after active treatment has been discontinued. Mercuric iodide (biniodide) in small doses, one-twentieth to one-tenth of a grain, three times daily, may judiciously be given for prolonged periods during which apparent health exists. Potassium iodide, in diminishing doses, should be administered from

time to time for a few days every month until the patient begins to show susceptibility to physiological effects from small doses; and then this susceptibility should be tested from time to time at intervals of a few months. Such supervision for two years at least seems to present the best prospect for riddance from the diathesis.

It may be mentioned in conclusion that, under intercurrent attacks of erysipelas, obstinate cases of tertiary syphilis of the larynx and trachea have undergone cure after resisting all medicinal treatment.

NATIONAL ?

The entire Congress numbered considerably less than four hundred members, yet the *New York Record* thinks the organizers have every reason to be proud of their work.

There are more than sixty thousand physicians regularly engaged in the practice of medicine in the United States. A considerable majority of them live west of the Allegheny Mountains; yet a little over three hundred men, nearly all of them residing on the eastern shore, assemble at Washington and proclaim themselves a Congress of American Physicians and Surgeons. A lawyer one said, "Egotism is a necessary qualification for a successful career in the medical profession."

The national associations, with a limited local membership, show the true qualification exists to an extraordinary degree in the eastern section. There were about a score of men from Billings' blighted malarious region in attendance at the Congress. A large number of these were denied admission, presumably because the special association to which they belonged, embraced too many names of western and southern men.

A score of foreign guests attended and took part. The Congress was a creditable assembly of eastern physicians and surgeons, except as to numbers, and was truly American in that it was largely composed of Americans, and it met at the United States Capitol.

OBSTETRICS AND GYNÆCOLOGY.

SURGICAL
TREATMENT
OF THE
PERINEUM.

BY

W. H. WATHEN,

M. D.,

LOUISVILLE.

*Professor of Obstetrics and
Gynæcology in Kentucky
School of Medicine.*Abstract of a paper read to
the Association of Obste-
tricians and Gynæcologists,
Washington, D. C., Sep-
tember 18, 1888.

(Reported for PROGRESS.)

Dr. Wathen spoke especially of the surgical treatment of lacerations or injuries of the muscular and aponeurotic structures that form the floor or diaphragm of the pelvis. He said there is probably no other subject in gynæcology about which so much has been written, that is of no real value, and that a relatively simple operation had

been made to appear so complicated, that it is seldom correctly performed. He passed by much of the immensity of pseudo-scientific rubbish, and took a practical view of the subject.

He said that the muscles and the fascia in the perineum give it strength, and when they are lacerated, no operation that does not primarily tend to re-unite them is logical, or will be followed by permanent good results. We may have prolapsus of the uterus, with rectocele and cystocele, resulting from subcutaneous rupture of these structures with no laceration or injury of the mucous membrane or other parts of the perineum. This condition is usually not diagnosticated by the attending physician, and the woman is subjected to various plans of treatment to hold the parts in position and relieve the annoyance from pressure, weight, etc., all of which give but little relief; nor can we cure her except by an operation to bring together and re-unite the torn ends of the muscles and fascia.

He said that when any or all of the perineal union of the muscles, or of the fascia, is lacerated, unless at once united and held together, the muscular contractions continue to widen the distance between the torn ends, so that the vulva gradually becomes

enlarged laterally. The extent of this lateral separation is governed by the degree of laceration and the length of time since it occurred. If the above is correct, then no operation will succeed that fails to bring these torn ends together so as to re-unite them. This is a simple question that holds good in all operations to restore the perineum in complete or incomplete ruptures, and if we are controlled by it, and are familiar with the technique of the operation, success will nearly always crown our efforts.

He did not know of any operation that is not faulty in this particular, but the operations that accomplish this purpose best are performed by Tait, Duncan, Simpson, Langenbeck, Saenger, Hart and Barbour; but if he understood their methods correctly, they do not fully appreciate the importance of dissecting up and uniting the muscles and fascia. This cannot be done by the usual method of denudations but is accomplished by a splitting process. The incisions should go deep near the anus on the lateral borders of the vulva, and the recto-vaginal septum should be split through the connective tissue between the vaginal and rectal layers, so that the vaginal flap may be thick enough to prevent sloughing.

He did not think it necessary to give the reasons why the primary operation should be performed, as there are but few men of recognized ability in obstetrics or gynæcology who are opposed to it, and we are not a little surprised to find in this list the name of the distinguished Professor, A. Charpentier, of Paris. His objections are illogical and are not sustained in actual practice where the operation is correctly done.

He had done the primary operation often without a failure; in fact, he thought the success is usually more perfect than in the secondary operation. The torn ends of the muscles and fascia are now easily held in apposition and unite within a few days. He reported a typical case upon whom he operated a few weeks ago for his friend Dr. —

The woman was delivered of a large child when 16 years old, and was torn through into the rectum for over an inch, and the vaginal wall and the connective tissue were torn two inches further up. The operation was done about one and one-half hours after delivery. He used about 15 sutures in the vagina and the perineum. The vaginal tear was united by silk sutures, and perineal by a silver wire and silk-worm gut, using only one silver wire as a base suture to hold together the ends of the sphincter muscle. The sanitary and hygienic surroundings were not good and she had but little after attention. She passed her urine, the vagina was washed out but a few times, and her bowels moved daily, after the second day. At no time was there any pus, and the entire laceration healed by first intention.

If the operation is well done he doubts the necessity of drawing the water or tying the legs. Nor is it necessary to wash out the vagina often. The urine and the lochia are not poisonous, especially after the second day, if strict asepsis has been observed in the operation.

Where any form of an aseptic animal suture is used the needle should be introduced and brought out just within the lower or external edges of the raw surfaces so that when they are united the sutures will be concealed or buried in the tissues. Sometimes a few superficial sutures will be required. The sutures should be introduced as to be entirely covered by the tissues and to bring the surface into even and exact apposition. If the sphincter ani is ruptured he always uses the base suture after the fashion of Emmet.

He does not destroy any tissue except jagged edges in some complete ruptures; the dissected part assists in protecting the wounded surface against the dangers of infection from uterine or vaginal secretions; and also increases the thickness of the perineum. He had never had a recto-vaginal fistule after an operation for complete ruptures nor did he believe it will often occur, if the operation is correctly done, after his method.

PATHOLOGY AND HYGIENE.

THE
HOMING
INSTINCT.*
AN EXPLANATION SUG-
GESTED.
BY
GEORGE M. GOULD,
M.D.
*"Prædus Questio dimidium
scientia est."*

I. As to the fact I shall briefly epitomize several examples that have come to my knowledge, or that I have observed, and which are trustworthy so far as trustworthy human testimony can make them.

Observation 1.—"Ben," a thoroughbred setter dog, was taken from his home, Norton, Mass., by railroad to Boston, and thence by the Old Colony Railroad to Wollaston Heights, a distance of thirty-five miles. He escaped, and in five hours barked at the door of his old home.* *

Observation 2.—"Jack," a Newfoundland, was taken from his home at Locust Bay, Long Island, N. Y., to Brooklyn, and thence by carriage to Sheepshead Bay. He escaped, and appeared at his old home, thirty-five miles distant, in three days. He had a cord about his neck, bitten off, that showed the cause of his detention *en route*.* *

Observation 3.—A collie was sent by express from Boston to Hartford, Mass. So soon as he was released he disappeared, and was at his former home in Boston, footsore and worn, in about ten days. The distance is about 100 miles.* *

Observations 4 and 5.—An Irish fox hound, "George," lost in a deer-hunt returns 125 miles, and "Tingwell," a hound, returns home 125 miles, both within about twenty-four hours.* *

Observation 6.—Several hounds that were being transported from Morgan County,

I NOTE.—An essay embodying the ideas of the present one was sent to the *American Journal of Psychology* about a year ago. To the great chagrin of both writer and editor (for I preserved no copy of the writing) the manuscript, soon after its receipt, disappeared from the editorial pigeon-hole, in a very mysterious manner, and has never been heard from since.

* * NOTE.—For full particulars, giving the owners' names, dates, etc., etc., see *The Homing of Dogs*, by my friend Mr. W. R. Lord, of Wollaston, Mass., (Published by the author).

Georgia, to Live Oak, Ark., escaped from the freight car at Memphis, and "in a short time appeared at the old home utterly starved and worn out—the distance being about 500 miles, air-line." * *

Observation 7.—A fox-hound, "Chorus," was sent from Albermarle County, Va., to Columbia, S. C. The dog remained quiet for twelve days, when he showed great anxiety and restlessness, and disappeared. In seventeen days the dog arrived at his home, having traveled at least 400 miles.* *

Observation 8.—Another dog of the same family returned from Alabama, a distance of not less than 800 miles.* *

Observation 9.—In a private letter written since the pamphlet quoted, Mr. Lord says: "I have an authentic account of a dog making 1,000 miles."

Observation 10. — In 1872 I saw 600 pigeons liberated in the Champs Elysies, at Paris. They had been brought in closed wicker-baskets from Belgium. At a given signal the covers were raised together, and the birds rose almost as a solid body, and, as if actuated by a single nervous center, moved without wavering or doubt in the direction of their home, where they arrived so soon as their wings could carry them.

Observation 11.—An intelligent farmer living in Kentucky, told me he once brought home in his overcoat pocket a tiny pig, one of a dozen, that he found in a cave three or four miles from home. The mother had wandered there just prior to her being brought to bed. Mr. B—— thought he would raise the youngster "by hand," as a sort of a pet, I think, but piglet had other ideas, and though its eyes were hardly open, it managed to escape that night, swam the river, and found the maternal breast. Its footsteps were traced the next day down to the river bank. The country is exceedingly rough, being a succession of almost perpendicular bluffs and hills.*

Observation 12.—An acquaintance told me he once took some little kittens in a bag, and, as he supposed, with sufficient precautions to prevent their escape, he threw them into the river a couple of miles from his house. He then continued riding beyond this point. Returning by the same road later in the day he overtook the poor little half-drowned wretches, one by one, making their difficult but certain way homeward.

Observation 13.—A pointer-puppy, "Hector," was sent from Cincinnati to Portsmouth, Ohio. "He returned by ways and means known to himself alone, once from Portsmouth, and twice from Lucasville, Scioto County, the last time in a blinding snow-storm." *

Observation 14.—The same dog was drugged with an alcoholic solution of morphine, and sent to Somerset, Ky., in a freight car. He slept most of the trip, but escaped from the car before reaching his destination, and "at 10 A. M. on the following day he turned up in Cincinnati, having run a distance of 142 miles in about twenty-eight hours."

Observation 15.—The same dog was "fuddled with ether," put in a wicker-basket, after "bandaging his nose with a rag that had been scented with a musky perfume." In this condition he was taken southwest to Danville Junction, thence east to Crab Orchard, and finally northeast to near Berea, in Madison County, Ky. When released

mine the establishment there of the home, as against the previous home of the mother? At what stage of fetal or early life would two forces become equal? Would eggs of the carrier pigeon just hatched, or the half-grown birds themselves removed, render the return flight themselves less certain? How long in various animals does it take domiciliation to establish a new equilibrium of the magnetic forces? My kitten after our moving across city, was sick and a torment to us for ten days, when he escaped from the house, and evidently seeking the old house, was absent two days or more. He never appeared at the old house, and finally returned to home No. 2, where he has lived contented enough since he failed to find No. 1. Mr. Lord calls attention to the suggestive fact that the cat, the most domesticated animal, has the strongest and surest homing instinct, and shows the greatest unrest when removed. Its love, too, is for the *locus*, not for the persons.

2 NOTE.—This case suggests a number of pertinent and interesting questions and experiments. Does birth at a place, or duration of intrauterine life in a locality, deter-

3 See a *Zoological Enigma*, by Felix L. Oswald, M. D., *Popular Science Monthly*, (some years back).

he "slunk off into a ravine, scrambled up the opposite bank and scampered away, at a trot first, and by-and-by at a gallop—not toward Crab Orchard, *i. e.*, southeast, but due north, towards Morgan's Ridge and Boonsboro, in a bee-line to Cincinnati, Ohio. They saw him cross a stubble-field, not a bit like an animal that had lost its way and has to turn right and left to look for landmarks, but, 'like a horse on a tramway,' straight ahead, with his nose well up, as if he was following an air-line toward a visible goal. He made a short *detour* to the left to avoid a lateral ravine, but farther up he resumed his original course, leaped a rail-fence, and went headlong into a coppice of cedar-bushes, when they finally lost sight of him." "A report to the above effect, duly signed by the Berea witnesses, reached the dog's owner on February 4, and on the following day Hector met his master on the street, wet, and full of burrs and remorse, evidently ashamed of his tardiness. That settled the memory question. Till they reached Crab Orchard the dog had been under the full influence of ether, and the last thing he could possibly know from memory was a misleading fact, *viz.*, that they had brought him from a southwesterly direction. Between Berea and Cincinnati he had to cross three broad rivers, three steep mountain ranges, and had to pass by or through five good sized towns," *etc.*, *etc.* *

Observation 16.—"According to a well authenticated report, the crew of the British East Indiaman caught an enormous tortoise near St. Helena, marked it with the brand of the company, and quartered it in the cockpit. But in the English Channel their captive crawled on deck and plunged overboard. Two years after, the same tortoise was caught in Sandy Bay, near Jamestown, on the South coast of St. Helena. No ocean current could have carried it there; it must have navigated by its inner compass a distance of seven thousand English miles." *

4. See a *Zoological Enigma*, by Felix L. Oswald, M. D., *Popular Science Monthly*, (some years ago).

There is hardly a person who has been a lover and observer of animals that could not add to the above many similar instances. Almost every household has some such story. Everyone has marvelled of the oft-repeated, beautiful cases of carrier pigeons. The yearly return of fish to their river spawning grounds—indeed the daily life of the dwellers in the ocean, perhaps more than that of their land brethren, is a capital illustration of the power. Here there are no stars, land-outlines, hills, variations of light, climate, winds, scents, *etc.* The salmon, sturgeon, whale, dolphin, turtle, do not get "lost" in the trackless monotone of their environment. It may be possible to explain the nature of bees by sight or scent to their floating hives, from miles-away wanderings, during which time the hive-keepers have drifted their boats several miles down the Mississippi or Nile. (The theory I advance will certainly not fit such cases). Or, again, the migrations of birds may perhaps be explained by the fact of the older birds that have been over the route before, training and leading the flocks of the younger ones. But such devices cannot explain the flight of carrier-pigeons, the perfect certainty and unerringness of our sixteen observations.

The facts, too numerous to overlook, too well-certified to, to doubt, must therefore be considered beyond all question.

II. But such facts are not sporadic and exceptional. They take place all about us, and all over the world every day. I believe the power has been one of transcendent importance to the preservation of whole species and genera of animals. Since the power of locomotion became at all developed in the earliest stages of animal life, almost every animal has been under the imperious necessity of leaving his fellows, offsprings or home, to get food, or to avoid becoming food. A necessity so stringent must have developed in the animal organism a power of accomplishing it without being "lost." The inability to return over unknown grounds,

through trackless spaces, means not only the loss of the young, but possibly of the species, and when this precious product of nature is in danger she has never failed to find the means of forefending such a catastrophe. Without the aid of this power the animal world would have been starved and stunted, and the freedom of wide movement, with all that implies, would have given place to an ant-like timidity and a slavish dependence upon the herd or tribe, and the limitations of the other senses. This power does indeed seem to be a true "sixth sense," and it is remarkable that it has been overlooked and ignored by scientists. It would be hard to think of the world so dependent upon the principle of gregariousness as the absence of this sense would necessitate. Individualism and the resultant growth of intellect, the evolution of peculiar ability and activity apart from that of the commune or greg, would have been impossible. Gregariousness bars the exceptional development of the individual whether of an ant, a sheep, or a negro.

III. Before this beautiful problem—the exact nature of the "instinct"—the world of science as well as the vulgar curiosity, stands in blank dumb wonder. No explanation is offered deserving a moment's consideration even as a tentative hypothesis. Indeed absolutely none at all is offered of such facts as observations 15 and 16. It is therefore with a good deal of hesitation that I offer the following suggestions: After pondering over the matter for a couple of years I believe the theory at least worthy of serious consideration as a "working hypothesis."

IV. A "sense" is the reaction of some peculiar mechanism of the organism, whereby it gains knowledge of the environment for its advantage in the struggle of life. The mechanism is but a specialized adaptation of a part for the function, which is in a degree possessed by all the protoplasm of the body. The means of conveying the stimulus to the organ is by some peculiarity of action of the outside world. In the soluble sub-

stances, *contact* has produced the sense of *taste*, in resisting substances the sense of *touch*. Volatile substances appeal to the sense of *smell* (a refinement of contact and touch). *Distant bodies* become known by *audition* through ærial vibration, and by *sight* and the *temperature smell* through etherial vibrations. What other forces of the environment exist to which protoplasm is sensitive? There is one that certainly exists, powerful, constant, continuously present, uninterruptedly streaming through our bodies, and bathing every atom with its subtle life. This is the force of terrestrial magnetism or electricity. The phenomena of magnetism and electricity are variants of the same unity, both being probably tensions and stresses of the ether whose specific vibratile energies constitute the sources of radiant heat and luminiferous sensation. Life is a continuous mutation of chemical forces in every molecule, and magnetic and electric phenomena are necessary concomitants of every chemical change. The functional activity of every nerve is associated with electrical phenomena. The earth's waters are full of creatures utilizing these forces for defense, attack, or various service. Electro-physiology is a science of great importance whose study has only been begun by Matteucci, Du Bois Reymond, Pflüger, Von Bezold, *etc.* The uses of electricity in therapeutics have become routine in every physician's hands. Similar uses of the magnet may be found indicated in Van Sant's, "The Physiological Action of Magnetism," (*Jour. Psychol. Med.*, N. Y., 1870); Hammond's "Therapeutical Use of the Magnet" (*Neurological Contributions* No. 3), *etc.*, *etc.* Metallo-therapy, together with the later experiments upon the insane and hysterical with magnets may be also mentioned. All of these only prove that the organism is interpenetrated by and responsive to magnetic forces, and it is easy to suppose possible an utilization of these forces, if such would be of

5 The *Gymnotus electricus*, the *Torpedo vulgaris*, the *malapterus electricus*, *etc.*, *etc.*

profit to the organism in its evolution, for special objects of advantage in the struggle for life. Such a decided advantage would be the ability to return home through unknown country or sea, after the day's chase by pursuer or pursued, in the hunt for food or in the thousand accidents of carnivorous life. The herders, the sheep, buffalo, etc., do not need, or seem to have the power in functional action to-day.

V. Is it possible for the animal organism to develop such a response to the magnetic and electrical forces of the earth as to gain an intimation of the direction of its distant home? To me not only is any other means of gaining such intimation absolutely unthinkable, but this one fits the case so appositely that I am astonished that no one has advanced it. The magnetometers and declinometers, and compasses of science give the hint. Why may there not be an organic magnetometer whereby the animal orients himself?

One important distinction needs to be kept in mind: The real purposes which the two, the organic and scientific magnetometer, are to subserve, are widely different. The animal, properly speaking, does not want to locate *himself*, does not even need to *locate* or know the distance of his distant home; he only needs to know the *direction* of the home. But the traveler, by land or sea, cares not a fig for the north-pole, but only for his own placing. The north pole of the animal is his home, and his use of the earth's magnetic forces need only be such as to give him indications of direction—east or west, north or south, matters not to him, only such stressing of a nerve-ending or nervous-centre as to point attention in one direction rather than others. It seems to me a necessity of logic and of the facts that some such mechanism must exist in the nervous system. I picture the matter somewhat like this: At the home, this mechanism remains in a condition of rest or equilibrium; habit begets such an equilibration that there is no stimulus or tension whilst there and remaining under the play

of the uniform magnetic forces of that neighborhood. Remove the animal to a locality where (as is the case) there is a difference of magnetic tension, another consensus of magnetic and electric forces, and at once the magnetic sense-organ feels tension stress, or torsion, there is unrest and dissatisfaction. Motion toward the animal's north-pole, the home, gives relief and increased satisfaction; motion away from the same, the reverse. With the perfection of the magnetic sense, the experiment of motion toward or away from home, would become unnecessary, and indications of direction would at once become clear when the animal's nose was turned *toward* home. In the observations cited it is evident that the swift certainty of direction is derived from no landmarks, no scent, no sounds, no knowledge of water ways, or trend of the land, no stars or sun. In case 15, the dog went "as if he were following an air-line toward a visible goal."

If it be objected that the forces of terrestrial magnetism are too slight to give sufficient pressure upon or indications to nerve-endings, I should answer that the objection betrays an ignorance of the almost infinite nothingness of the force of the etherial stimulus of the retina. A change of tint from that of 756 to that of 763 billions of vibrations per second is a change of force unmeasurably smaller and more delicate than that producing torsion or dip of the magnetic needle.

The discovery of Faraday that all substances are either diamagnetic or paramagnetic helps our mind here. All bodies arrange themselves either equatorially or axially in the magnetic field. No metallic compass boxed liked a ship's needle is therefore needed. Both paramagnetic and diamagnetic substances exist in the body, and

6 NOTE.—Mr. Lord suggests the power is the result of high training. I should say it is the result of exceptional preservation of the power. Doubtless the persistent influence of domestication has dulled the power in some dogs. The resumption of habits of chase, perpetuated by breeding would preserve or re-arouse the fading "instinct." In such a case it would indeed be a result of training, but not a *de novo* creation.

hence there is no impossibility from this side of such an organic magnetometer. The earth's magnetic and electric forces, different in every different locality, gives the source of the external stimulus, and it is abundantly proved that protoplasm and the body in all its parts is responsive to such forces. There remains only the proof of the register, the specialized organ, the nervous mechanism that would show tension or torsion or pressure or other indication of non-equilibrium, when it is removed from the locality where habit has engendered rest. At the north-pole the needle stands perpendicular, in equilibrium. At the animal's home the same essential condition may be supposed to exist. Remove the needle and its pointings and its declination tells where it would be at rest; remove the dog from its north-pole and the differences of magnetic pressure may reasonably be supposed to indicate the direction of magnetic rest.

VI. Is there any indication in physiological psychology, or brain anatomy, of the existence of such a specific organ of the magnetic sense? The differentiation and localization of cerebral function is at present in such a state of uncertainty that only the cortical centers of motion and vision are reasonably certain and definite. There is one organ in the central line at the base of the brain that has always been a puzzle to the physiologist. No function could be ascribed to it, or use found for it.

Struck by its position, and evident though mysterious importance in the animal economy, Des Cartes considered it the seat of the soul itself. This is the pineal gland. In view of the fact that it fails upon stimulation to give any indications of function, and that none has ever been ascribed to it, it must be held highly curious and anomalous that it is such an extremely vascular organ. This becomes all the more perplexing in view of the common opinion that it is the remains of some atrophied organ of functional service to lower forms of life. We know it was an organ of far more pronounced develop-

ment in some extinct amphibians. Mr. Baldwin Spencer's beautifully illustrated paper (*Journal Microscopy*, 1887), apparently clearly demonstrates that it is in all mammalia the rudiment of what was once a functional eye in the Ichthyosaurus, Plesiosaurus, and other now extinct animals. In certain species of lizards, e. g., the New Zealand spheonodon, the process of extinguishing the median "eye" seems only partially carried out at the present time. At the vertex of the head there is a modified central scale covering a gap, the parietal foramen, in which lies the "eye," connected by its stalk or "optic nerve," with the epiphysis or pineal gland. The "eye" has all the essential structures of the normal eye, retina, lens, transparent media, etc. In one instance the pineal nerve does not exist, though the "eye" and "gland" are present. In yet others the "eye" is wholly within the skull, the parietal foramen having closed. In this connection certain queries arise in my mind: What utility and stringent necessity of the organism could have called into being so complex and highly differentiated a structure as the median eye, which need then disappeared; and left the eye to atrophy throughout countless ages of time? What need was there of a third "eye?" The old proverb of a cat's need of nine tails comes to mind. Moreover, magnetism being a mode of action of the ether, may it not rather be possible that, at least in its early development, the organ of the focalization of magnetic forces was affected by means similar to the eye, that focalizes ethereal vibrations? If so, the retreat of the organ from the surface to within the skull and its limitation to the so-called gland would be possible, (since magnetic forces penetrate all matter), and would be an advantage in evolution. But all this is the limit of fanciful speculation, and I return to my contention that for a functionless organ to remain so highly organized and vascular through millions of years and in numberless species of animals, seems to me altogether

too much like crediting our grand old Mother Nature and her daughter, Evolution, with the sense of mechanism and the adaptations of a fool. Examining the embryological development of the gland we are struck by its early appearance and the universality of its existence in the vertebrata—or those animals having the locomotor functions best developed. Balfour calls it “the most remarkable organ in the roof of the thalamencephalon,” and describes its noteworthy peculiarities at length. (*Embryology, Vol. II, pp. 356 et seq.*). Of exceptional interest is the sabulous matter at its base, the so-called *acervulus cerebri*, or sand-heap, composed of the phosphates and carbonates of lime and magnesia, bodies extremely diamagnetic. The surrounding medium, the “ferric solution,” the blood, is highly paramagnetic. According to the law of the second category of Faraday’s magneto-crystallic phenomena, the difference of susceptibility between the body and its surrounding medium would here be emphasized and give origin to the differences of tension required in the organic magnetometer. In this way it might be possible for the diamagnetic phosphates of the *acervulus cerebri* to reach to the traversing magnetic current sufficiently to convey to the nerve end-organs tensile intimations of direction.

I have been able to gather little of definite value from cases of pathology of the pineal gland. In one case a tumor of the gland produced, among other symptoms, restlessness and a tendency to walk, and a giddiness or vertigo, phenomena that might be expected on the theory above tentatively broached.

VII. Finally the thought seems worth recording that homesickness may have a physical basis. If, as suggested, there be such a nervous reaction to the magnetic and electric currents of the earth, then the human

nostalgia heretofore considered as a matter of pure sentiment and mentality, may turn out to be founded upon disturbed equilibrium of the organic magnetometer. A feeling of unrest and subjective concentration has been noticed in animals before they resolve upon their homeward journey. If in human beings, from disease and other reasons, the functional activity of the magnetic sense-organ are not sufficiently clear to govern direction of the body homeward, they may be strong enough to give the nervous system a sense of unusualness, and strain, that co-operating with, if not causing, the longing, may set up the pronounced home-sickness. I am convinced beyond any doubt that the visions and yearnings of the home-sick youth are quite as much for the sights, the house, the hills, the *locus*, as for the friends themselves. If all one’s friends were about him, and the home far away, there yet remains the most pronounced dissatisfaction. When I return to the home of my boyhood, where strangers now live, there is a sense of rest and peace that is wholly apart from human associations and beyond the capacity of words to explain.

Indeed, the scope of the function is yet wider, and has a significance that is political, national, and historical. Few facts are more striking in the distribution of peoples and the habits of nations, than the unreasonableness of individuals, tribes, and even races about the removal of residence. Statesmen and sociological students know this deep instinct must be allowed for always as in the count. Tyrants and the enslavers of mankind have really built upon this fact, systems of extortion and wrong that otherwise would not have been borne. Families and societies stick to a spot once settled upon despite volcanoes, earthquakes, floods,

7 The gland, be it noted is one of the very few single organs of the body, as there are very few single functions, bilateralism being the rule. The faculty of articulate speech has a single cortical center. The organic magnetometer must necessarily be a single organ.

8 I have been twice startled to find myself “lost” in woods, in cloudy or foggy days. There was a decided feeling that I should turn one way rather than another, that was not derived from any conscious conclusions as to landmarks, etc. I never trusted the “instinct,” or obeyed it. I am told that travelers lost on prairies, have learned the best way back to camp is to move forward as it were blindly, not trusting their ordinary senses at all.

drouths, malaria, illness, niggardliness of the earth, and a hundred other causes, any one of which were enough to drive him forth, if man were a reasoning creature, and were not forced to remain by some power he knows not of. If you ask such why they do not migrate they can give you no better reason than the cat that starves about the deserted house. The strange destiny that drives people back to the place of their nativity out of more fruitful lands, or that makes them seek it in order to die, is a common observation. Another instance is the fatality that pursues a criminal and makes him return to his home where he is known, and where the danger of capture or detection, or the shame of his life is borne, rather than live safely or unknown among strangers of a distant country. The last pathetic echo of the yearning is in the desire to be taken home, and buried there, after the death far away.

VIII. The chief points I have tried to make clear are these:

1. It is certain that some animals are able to proceed to their distant homes from places and across countries they have never seen or known, and by means of some power other than the ordinary action of the so-called five senses.

2. This power, far from being exceptional has been of the greatest importance in the evolution of animal life upon the globe, and has been universally operative in the vertebrata, and animals whose powers of locomotion have been highly developed.

3. Common sense and science are absolutely at a loss for any conceivable explanation of the strange power. In default of a better the following is thrown out as a tentative or working hypothesis.

4. The magnetic and electric forces of the earth are continuous, different for different localities, known to influence the body profoundly, and offer an external stimulus sufficiently strong and clear to give intimations of direction to a properly constructed receptive mechanism.

5. The supposition of an organic magnetometer, a mechanism for reaction to the earth's magnetic and electric forces, is logical and not contradicted by any inherent impossibility. At the animal's home there is a condition of rest developed by habit; transfer the animal to a distance and the difference of magnetic impact produces stress, torsion or indications of direction toward the position of equilibrium. The animal's north-pole is his home.

6. Perhaps the pineal gland, an organ whose function has hitherto been unknown, with its diamagnetic acervulus and paramagnetic blood, may be the organ of the magnetic sense. The discovery that it is the remnant of a median "eye" once functional—or supposably so as an "eye,"—in now extinct animals, does not render such a supposition impossible, but rather adds to its probability.

7. The hint is added that nostalgia may have a physical basis, as well as the strange peculiarity that fastens people to an inhospitable spot, or drives them back to it.

The writer recognizes perfectly well the speculative character of the above suggestions, and regrets his present inability to prove or disprove the same by experiment. He would suggest the trial of permanent magnets strapped to a dog's head, the dog having been proved to possess a certain homing power in other or differently placed trials. Other experiments will suggest themselves to any one having the time and opportunity to carry them out. Dissection of the "glands" of animals possessing the homing power, as compared with others not having it, macroscopical and microscopical examination, etc., would be interest.

CAMPHO-PHENIQUE.

A new and useful antiseptic, concentrated, yet not caustic, has been discovered in the union of gum, camphor and phenol. It is decomposed by water and by glycerine. It is powerfully stimulating and anaesthetic.

BOOKS AND PERIODICALS.

THE THEORY
AND PRACTICE
OF THE
OPHTHAL-
MOSCOPE.

A Hand-Book for Students.

BY

JOHN HERBERT

CLAIBORNE, JR.,

M. D.

*Instructor in Ophthalmol-
ogy in the New York
Polyclinic, etc. Phy-
sicians' Leisure
Library.*

GEORGE S. DAVIS,
Detroit, 1888.

The object of the author has been to provide a hand-book for students. After briefly reciting a few elementary principles in refraction, the author sets out to describe the form and character of lenses. He attempts to follow what has been called "the inch system." He says: "The convex lens which brings parallel rays of light to a focus one inch from its opti-

cal center is taken as a standard for convex spherical and cylindrical glasses. Such a lens is called a convex No. 1. Having a standard, we may proceed to others. A convex lens which unites parallel rays at two inches from its optical center, is termed a convex No. 2, and so on. The strength of lenses is inversely as their focal distances. The strength of a convex No. 2 is obviously one-half as great as a convex No. 1. The strength of lenses is expressed in the form of a vulgar fraction, $\frac{1}{2}$, $\frac{1}{6}$, $\frac{1}{10}$, and so on." If the inch system of measuring the focal lengths be relied upon, why should any fractions be employed at all? Upon what ground are we to assume a lens which focuses light at an inch from its optical center should be called No. 1? and upon what ground is this taken as a standard of refraction? If the author would study Porterfield, Priestly, Thomas Young, or even Donders, he might find that the unit of refraction is derived from the maximum angle of refraction of light entering a Crown-glass sphere; that this angle is 90° ; and, that lenses constructed upon scientific principles, must be ground to represent definite fractional parts of this unit, without any reference whatever to the so-called inch.

Does the author suppose the size of the disc represented by his so-called No. 1, must bear a certain relation to the space most conveniently adapted to a spectacle lens? If so, what would he think of a lens having a radius of 45° which focused light at one inch from its optical center, and which was no more than three quarters of an inch in the diameter of its disc? Or another lens of $22^\circ 30'$ radius, focusing light at one inch from its optical center, and having less than half an inch as the diameter of its own disc? Or, to make the argument still more striking, what would he think of a disc three inches in diameter with a radius of 90° ? In all seriousness, we commend him to Lieutenant Meyer's work on "the quadrature of the circle." Spectacle lenses must be constructed of spheres whose quadrant presents a disc of no more than one and a half inches in diameter, for the obvious reason that it is desirable that lenses of high refracting power shall have as little weight as possible. The segment of a perfect sphere, representing a definite fraction of the quadrant of that sphere, constitutes the only scientifically constructed spectacle lens, that are now in use.

Says the author: "In this country glasses are usually recorded in the form of vulgar fractions. In England and on the Continent, the French system of dioptrics or dioptries. One dioptre is the equivalent of $\frac{1}{36}$ or $\frac{1}{40}$, accordingly as the French or English inch is taken as the standard."

This definition will hardly prove satisfactory to the student, since it is neither clear nor accurate. The metrical system of grading lenses is an attempt at a more scientific method of measuring focal lengths than that employed in what has been called the "inch system," and an easier and simpler method than the scientific division of the unit of 90° radius into uniform fractional parts. One dioptre in the metrical system represents a lens of one metre focal length, twenty dioptres corresponding to the twentieth part of one dioptre in focal length,

one-half diopetre corresponding to two metres of focal length, and so on.

To the student already familiar with mathematical science, the first three chapters of this work are not likely to be attractive. To the student without mathematical knowledge, the author's treatment of the subject will hardly prove sufficient to enable him to comprehend the scientific principles of ophthalmoscopy.

At page 74 the author says, "The sulphate of atropia;" The United States Pharmacopoeia says: "Sulphate of atropine;" the author says: "A one per cent. solution of the sulphate of atropia is made by dissolving five grains of the salt in an ounce of water." Just what proportion of the water he regards as the equivalent of a grain is not stated. If a minim be taken to represent the equivalent of a grain of the salt, then instead of the solution being a one per cent. solution, we must allow that one grain of the salt is contained in but ninety-six minims of the fluid. Now, the student would like to know how often the instillations of this solution should be repeated, and the experienced practitioner will inquire how many instillations of the author's two per cent. solution of ten grains to the ounce of water, would be required to kill an average adult. It is notoriously true that the old standard solution of four grains of atropine to the ounce of water generally produced toxic effects in adults, if the instillation were repeated as often as once in six hours. Very few adults indeed can stand the instillation of the author's "one per cent." solution more frequently than three times in the course of the day.

Not having met the author of this work, and having no knowledge of him, beyond that which is contained in these pages, the writer of this notice ventures to suggest that a more extended experience may serve to mature the author's judgment. There is undoubtedly a demand for a good elementary text-book on physiological optics and the principles of both the construction of the ophthalmoscope and its application to the study of intra-ocular conditions.

This notice, though not as laudatory as the young author might be expected to hope for, is nevertheless written in a spirit of kindness, and with the hope it may induce an early revision and enlargement of the work.

THE
APPLIED
ANATOMY
OF THE
NERVOUS
SYSTEM.

BY

AMBROSE L. RANNEY,

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Physiology of the Ner-
vous System in New
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uate School
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pital.*

*Professor of Nervous and
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Medical Department
of the University
of Vermont,
etc., etc.,
etc.*

Second edition. D. Apple-
ton & Co., New York.

In the preparation of a second edition of this work, Prof. Ranney has taken pains to rewrite and enlarge certain portions, especially those relating to the brain, the spinal cord and the cranial nerves, it being the aim of the author to furnish a reliable guide to the student of neurological anatomy and physiology, in which may be found the views of the leading minds in that field, as well as a clear interpretation of the main

facts applicable to diagnosis, the whole representing a series of lectures delivered at the post-graduate medical school.

Prof. Ranney commits a great error in going outside his legitimate field in an attempt to discuss optical defects and their correction with spectacles. At page 358 are presented three lines of test-letters, which it is stated the normal eye should read at twenty feet. Says Dr. Ranney, "Vision is then said to be normal. If the eye cannot do this at twenty, but can at ten feet, then vision is $\frac{10}{20}$, or one-half of the normal, and so on. To test the eyes, place the letters at twenty feet distance, in a good light. Try first one eye and then the other. Any eye which cannot read the letters fluently at this distance, deviates from the normal standard, and should have a thorough examination." In the first place, Dr. Ranney's letter represent no definite scheme of projection. No portion of the limbs of any letter in his series bears any definite mathematical relation to the whole area of the letter. In the second place, that letters do not occupy the same amount of cubical space, or, in other words, they are not all of the same size. To test the refraction, it is necessary that the

conditions for making the test should be such as to secure parallel rays of light, and the absence of any possible change in the refraction of the eye by the exercise of its power of accommodation. If the area of the surface occupied by the test-letters correspond to an angle of five minutes, and the limbs of the letters represent one-fifth of the whole surface of the letter, or of the cubical space occupied by it, and the distance be twenty feet, then the eye which sees the letters under these conditions, might be said, in fact, to be normal as to both the acuity of vision and the state of refraction. The moment the patient is brought nearer to the object, the important condition of parallel rays of light has been sacrificed, and the so-called test is without value. Further, it may be stated, that nearly all hypermetropic eyes, and especially in young people, may, by the exercise of the accommodating power and the pupillary limitation of the area illuminated, be able to see the test-type at twenty feet—not Dr. Ranney's test-type, but those scientifically graded test letters of Snellen, to which Dr. Ranney's bear no resemblance. To carry out the requirements of a scientific test of refraction, the relative acuity of perception must always be included; and if the eye does not see $\frac{20}{20}$, it must see $\frac{20}{30}$ or $\frac{20}{40}$, or some other larger object, always corresponding to a definite increase in the angle of refraction. Nothing could be more ridiculously absurd than to suppose a person who is able to see Dr. Ranney's letters at ten feet only, has but half the normal power of perception.

A person may not be able to see at twenty feet an object which the perfectly normal eye sees at two hundred feet, and yet, by correcting the refraction in this person's eye, the visual perception is normally acute, and the angle of refraction equal to five minutes for parallel rays. The dense ignorance which seems to pervade the minds of most of the general writers on this subject, warrants the general belief that all attempts at popularizing any branch of science, must

necessarily lead to a sacrifice of the fundamental principles of that science. Dr. Ranney should either have employed the aid of a competent ophthalmologist in the preparation of this portion of his work, or left it out altogether; for it is painfully evident that he knows ever so much less than nothing about it. At page 369 Dr. Ranney says, "When either eye is alone affected with blindness, it indicates, as a rule, that the optic nerve is pressed upon, or otherwise impaired, at a point situated in front of the optic chiasm; since if the optic tract were the seat of the existing trouble, both eyes would be affected, as it would be almost impossible for the pressure to affect the non-decussating fibers and still leave the decussating fibers uninjured, or vice versa."

To say nothing of the older literature on the subject, Prof. Mooren, of Düsseldorf, presented to the Ninth International Medical Congress an elaborate paper, embodying clinical observations and *post-mortem* appearances, showing the seat of the perception of sight to be located in the occipital lobes.

At the conclusion of the reading of this paper, Dr. Chisolm, of Baltimore, presented a patient having a large tumor on the cortex of the left occipital lobe, with complete blindness in the right eye, and which had, until a few days before the exhibition of the patient, caused no impairment of the sight in the left eye. Detachment of the retina, extensive retinal hæmorrhage, mature cataract, osseous degeneration of the hyaloid, or of the capsule of the lens, and very many other conditions, establish blindness in one eye alone, whilst the sight in the fellow eye may not at all be affected. Out of more than twenty years' experience in this special department of practice, the writer of this notice has not observed diseases of the optic nerve, or such conditions of it, as are described by Dr. Ranney, in two per cent. of the cases where one eye is alone affected with blindness. His rule, therefore, must be purely imaginary, as it has no foundation in fact; and, his further statement that total blindness

of one eye is frequent evidence of glioma or sarcoma within the orbit, cannot fail to amuse the well-informed reader. The presence of these intra-ocular conditions, he says, will probably be by symptoms referable to paralysis of some of the muscles of the eye, since the same pressure will also be likely to affect the third, fourth and sixth nerves.

As Dr. Ranney does not mention the eyeball in this connection, it may be said that our criticism upon the latter part of his diagnostic phenomena is unjust; yet if he means that glioma and sarcoma arise within the orbit, and external to the eye ball, with anything like equal frequency to their appearance within the globe, his knowledge of the literature of this subject may be compared to his familiarity with the methods of testing the refraction.

In the strictly anatomical portion of the work, Dr. Ranney displays creditable familiarity with the subject; and had his labors been confined to anatomy and physiology, we should have found nothing but words of commendation for his effort. He has evidently spent much time in the preparation and revision of the work; but, unfortunately, he has depended too much upon the popular essays in *Harper's Magazine* for the minutia of some of the scientific processes he attempts to describe.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES.

EDITED BY

CHARLES E. SAJOUS,

M. D.,

And Seventy Associates.

Illustrated with Chromo-
Lithographs, Engravings
and Maps. Philadelphia
and London. 1888.

F. A. DAVIS,

PHILADELPHIA.

This is a work handsomely issued in five octavo volumes. It embraces everything new in medical literature for 1887, embracing the entire range of experimental observation in the whole civilized world. It is a work of great value, and no practitioner can afford to be without it. Many of the

articles have never been published in any form before. The type is large and clear, and the illustrations unusually good.

CORRESPONDENCE AND SOCIETIES.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

BY

J. C. CULBERTSON,

M. D.,

OF CINCINNATI.

St. Louis, September 25, 26
and 27, 1888.

The Mississippi Valley Medical Association convened to-day in Pickwick Theatre in this, the future great city of this great valley. The attendance was large and promises to be one of the most profitable sessions ever held by a medical society

in this portion of our country.

The session was opened with prayer by Rev. Mr. Merrell; and Dr. Love, the Chairman of the Committee of Arrangements, introduced His Honor Mayor Francis, who, in a most felicitous and elegant manner, welcomed the Association to the hospitalities of the city, and was succeeded by that genial Nestor of the profession, Ch. J. Boislincere, who, on behalf of the local profession, extended a welcome. The President, Dr. Reynolds, of Louisville, and Dr. Matthews, also of Louisville, responded in behalf of the Society. Those who know these clever knights need not be told that some elegant oratory was let loose, and that the audience was fairly charmed.

Dr. C. G. Comegys, of Cincinnati, read the first paper on the programme, his subject being the now absorbing theme of

YELLOW FEVER,

In which he gave the etiology, pathology, and most approved treatment. The discussion was taken up by Dr. Baily, of Louisville, who has had a very extensive experience in the treatment of this disease, narrating his experience in former epidemics, and taking occasion to criticise and condemn the shot-gun quarantine that is in force in many localities in the South, characterizing it as more cruel and even more deadly in its effects than the dire disease

itself. In this he seemed to voice the entire sentiment of the Association.

Dr. McPheeters, of this city, who has had a long and large experience with the disease, endorsed all that had been said by previous speakers, reiterating that there was no danger from personal contact with individuals, but that the danger was wholly from the microbes carried in the clothing, luggage, etc.

A committee was appointed to draw up suitable resolutions expressing the opinions of the Society on this important subject.

The members of the local profession vied with each other in personal attentions to the visiting members, and one of the pleasantest—aye, charming—dinners was at the beautiful home of Dr. Love, where the good doctor and his wife just gave us a feast worthy of royalty itself.

After dinner Dr. J. A. Larrabee, of Louisville, opened the discussion on

INFANT FEEDING,

And was followed orally by Dr. Cook, of Mendota, Ill. Dr. Larrabee spoke favorably of several varieties of manufactured food for infants. Two infants in Louisville, he said, had each consumed 1,248 cans of a certain brand in eighteen months, and were fat and well. He thought the prepared foods which had to be mixed with milk often failed because the milk was not pure rather than because the foods themselves lacked merit, the trouble with the milk being that it was not protected from microbes. Dr. Cook believed nothing so good for a young baby as the milk of a healthy cow, the child's mother's milk always excepted.

Dr. C. H. Beard, of Chicago, read a paper on "Diseases of the Middle Ear;" Dr. D. R. Brower, of Chicago, a paper on "Exophthalmic Goitre—Treatment by Strophanthus;" Dr. Wm. Dickenson, of St. Louis, a paper on "Retinitis Albuminurica;" and Dr. C. R. Early, of Ridgeway, Pa., a paper on "Diphtheria."

KENSINGTON GARDEN PLEASURES.

In the evening the visiting members were taken out to Kensington Gardens by the resident physicians.

SECOND DAY,
SEPTEMBER 26, 1888. | The second day's proceedings of the Mississippi Valley Medical Association was opened with a most excellent paper on the conditions which precede serious

LESIONS OF THE KIDNEY,

By Dr. C. S. Bond, of Richmond, Indiana, in which the author, in the most conclusive manner, showed the great necessity of making quantitative analyses of the urea that is passed by the patient in a given time; that this was even more important than the examination for albumen.

The second paper read was by Dr. Joseph Matthews, of Louisville, Ky., on

OBSCURE RECTAL DISEASES,

In which he demonstrated that many of the so-called neurosal affections were primarily due to lesions in the rectum and lower bowels, and that many uterine and ovarian disorders were so only in the symptoms indicated as pointing to those organs,—were, in fact, rectal in their nature. The paper was the subject of a warm discussion, on account of its frequent reference to a paper read by Dr. Goodell at the last meeting of the American Medical Association, on uterine disorders.

Succeeding this was a paper by Dr. Mudd, of St. Louis, on "Contusions and Lacerations of the Kidneys,—Nephrectomy," in which was demonstrated the value of this operation in many cases of traumatic injury.

"The Absorption of Water by the Colon, and its Therapeutic Uses" was the theme of an excellent paper by Dr. G. J. Cook, of Indianapolis, after which was a valuable paper by Dr. J. M. Emerst, of Atlantic City, Iowa, on "Perforating Ulcer of the Duodenum."

Dr. W. T. Porter made for the Association some very instructive vivisections illustrative of various conditions of the larynx, and also the actual condition where that organ is removed.

YELLOW FEVER MANIFESTO.

The manifesto is the result of a discussion on the subject of yellow fever, introduced by a paper read on Tuesday by Dr. C. G. Comegys, of Cincinnati. At the close of the discussion the whole matter was referred to a committee, consisting of Drs. George Homan, of St. Louis; J. A. Larrabee, of Louisville; J. D. Griffith, of Kansas City; Geo. N. Kreider, of Springfield, Ill.; G. A. Collamore, of Toledo, O.; David S. Booth, of Sparta, Southern Illinois; A. U. Williams, of Hot Springs, Ark.; and A. P. Waterfield, of Tennessee, who were instructed to draft resolutions embodying the sense of the Association on this subject. The following resolutions were adopted to-day by unanimous vote and without discussion. They read as follows:

Resolved, That it is the sense of this meeting that yellow fever is not contagious in the ordinary sense of the term; that it cannot be communicated from the sick to well, except in an atmosphere containing germs.

That the mildness of the present yellow fever invasion, and the lateness of the season, warrant us in strongly deprecating the fear now existing in many Southern communities, the present rate of mortality being not greater than that which ordinarily obtains in typhoid fever.

That the self-imposed quarantine regulations now in force in the States north of the infected districts are not only absurd, but inhuman and unworthy of the age in which we live.

That the quarantine regulations, to be effective, should apply to the baggage, clothing and effects, rather than to the person of the individual.

That when such effects come from infected districts they should be destroyed by fire and the owner reimbursed from public funds.

That cities and towns to the north and upon lines of travel may safely provide hospitals for the reception and care of the sick.

The resolutions are signed by the members of the committee.

ENTERTAINMENTS.

In the way of entertainments not of a strictly medicated order, as laid down in the printed programme, the visiting members have had a surfeit, the local profession vieing one with another in completely occupying all of our time not given to scientific work. Tuesday evening there was an excursion to Kensington Gardens—"Fall of Pompeii," where there was a grand finale of fireworks. Wednesday evening there were most elegant and enjoyable receptions at the residences of Dr. N. B. Carson, Mr. Kerens, and Col. J. T. Drummond. In each of these mansions the members were received and entertained by a galaxy of the fairest daughters and courteous gentlemen of this great city. It goes without saying that the brethren were fairly deluged with the winning ways and witty sayings of the elegant hosts of the occasion. It would not only be invidious, but actually impossible, to make distinctions where the refining influences of luxury, education, travel and art were the promoters of our enjoyment.

<p>THIRD DAY, SEPTEMBER, 27, 1888.</p>	<p>The third day's proceedings opened promptly at 9:30 o'clock, as the Presiding Officer and Committee of Arrangements felt that a long and active session was before them. And it was soon apparent that all their anticipations were to be fully realized, and as the noon hour approached a motion was made and unanimously carried to continue the session without intermission until 3 o'clock.</p>
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Every detail of the management was carried out, including resolutions of thanks to the local profession for the generous and open-handed hospitality extended, and to the good people who had opened wide their doors and greeted the members in their own houses, in their own way—and that way was one not only thoroughly appreciated, but will ever be remembered as a bright, green spot in our lives.

The session was opened by Dr. Rose Bryant, of Chicago, in a paper on "Psychical Treatment for the Insane." Dr. Bryant advocated the adoption of the cottage plan of asylums, dispensing entirely with enforced confinements and recommending humane treatment throughout. She claimed that asylum superintendents who voluntarily keep insane patients in the "insane atmosphere" of the great crowded ward ought themselves to be confined for six months in order to learn how to sympathize with their charges. A little discussion was provoked by this paper, the gist of which was that asylum superintendents can not be expected to effect cures in the shortest possible periods when they are given a class of attendants but little above the grade of ordinary domestic servants with which to treat diseases requiring the nicest psychological discrimination.

The author both in the paper presented and in her remarks closing the discussion, evinced a degree of practical information and familiarity with her subject that called forth the highest encomiums of praise from the entire association.

Dr. Frank Lutz, of St. Louis, brought before the association a man whom the doctor had successfully treated for fracture of the patella by boring through the bone and repairing the fracture with silver wire; a performance which called out demonstrations of hearty approval from the assembled surgeons. Dr. Lutz remarked that he had two such cases to show, but the other patient, a woman, had recently been committed to the Work House, and he had not

been able to see the mayor in time to have her before the Convention.

Dr. D. S. Booth, of Sparta, Ill., presented an anomalous case under the title of "What is it?" the subject being a nine-year-old boy. The child had suffered from convulsions and spasms resembling those of rabies for several years, and yet he seems to be neither rabid, insane nor idiotic, although his affliction is marked by some symptoms peculiar to each of these conditions. The doctor called it hereditary epilepsy, and most of his confreres agreed with him.

Dr. H. H. Middlekamp, of Warrenton, Mo., discussed the question, "Are Immediate Amputations Justifiable?" to an affirmative conclusion, his decision being qualified by the statement that, before proceeding to the use of the knife pending the access of reaction, the surgeon should make sure that the destruction is beyond the power of nature to remedy.

Dr. S. A. Rauch, Secretary of the Illinois Board of Health, submitted a long statement of his official connection with the yellow fever panic, particularly as to quarantine set up by the Cairo (Ill.) Board of Health. His statement that the yellow fever germ can not live in a continued temperature of 70° or under, and can not at this late period spread to any State north of the Tennessee line, called out the most pronounced indications of approval from the Convention. At the close of Dr. Rauch's address the Convention elected him as Chairman of a committee for the further investigation of yellow fever epidemics, with the power to appoint his associate committeemen.

Dr. Walter Coles, of St. Louis, offered a resolution providing for the appointment of a committee of two from each State and Territory west of the Alleghanies to consider and report on the best means of elevating the standard of medical education.

The resolution was unanimously adopted. The President appointed the following gen-

tlemen to serve on that important committee:

Alabama—Jerome Cochrane, Mobile; Ben J. Baldwin, Montgomery.

Arizona—(To be filled).

Arkansas—A. U. Williams, Little Rock; P. O. Hooper, Little Rock.

California—Walter Lindley, Los Angeles; William S. Whitwell, San Francisco.

Colorado—G. G. Duggins, Pueblo; Thos. D. Hawkins, Denver.

Dakota—E. M. Darrow, Fargo.

Florida—T. O. Summers, Jacksonville; W. S. Airth, Greenville.

Georgia—J. McF. Gaston, Atlanta; S. M. Mathews, Fort Valley.

Idaho—Jesse K. Dubois, Boise City; J. H. Bean, Eagle Rock.

Illinois—John H. Rauch, Chicago; D. R. Brower, Chicago.

Indian Territory—(To be filled.)

Indiana—T. B. Harvey, Indianapolis; C. S. Bond, Richmond.

Iowa—W. F. Peck, Davenport; J. M. Emert, Atlantic City.

Kansas—P. P. Trueheart, Sterling; J. A. Lippincott, Lawrence.

Kentucky—J. N. McCormack, Bowling Green; Arch Dixon, Henderson.

Louisiana—H. Dickson Bruns, New Orleans; Robert J. Young, Abbeville, Vermilion county.

Michigan—Laertes Conner, Detroit; Hal C. Wyman, Detroit.

Minnesota—E. A. Fisher, Long Prairie; Jay Owens, Minneapolis.

Mississippi—W. H. Barnard, McKinneyville; Thos. R. Petway, Chotard.

Missouri—Walter Coles, Chairman Committee, St. Louis; Frank R. Fry, St. Louis.

Montana—Charles G. Green, Helena; Thos. J. Murray, Butte City.

Nebraska—A. S. V. Mansfeld, Ashland; A. R. Mitchell, Lincoln.

Nevada—(To be filled).

North Carolina—Thos. F. Wood, Wilmington; Eugene Grissom, Raleigh.

Ohio—J. C. Culbertson, Cincinnati; Sam'l S. Shorn, Toledo.

Pennsylvania—W. H. Daily, Pittsburgh; J. B. Murdoch, Pittsburgh.

South Carolina—R. A. Kinloch, Charleston; Henry D. Frazer, Charleston.

Tennessee—A. P. Waterfield, Union City; Deering J. Roberts, Nashville.

Texas—R. C. Chilton, Dallas; F. E. Daniel, Austin.

Utah—J. J. McAchran, Salt Lake City; Walter R. Pike, Provo City.

West Virginia—S. L. Jepson, Wheeling; T. A. Harris, Parkersburgh.

Washington Territory—N. Ostrander, Olympia; J. C. Sundberg, Seattle.

Wisconsin—Henry T. Wenzel, Milwaukee; Nicholas Senn, Milwaukee.

Wyoming—J. J. Marston, Cheyenne City.

Dr. Frank R. Fry, of St. Louis, read a paper on the "Clinical Study of Alcoholic Neuritis," and Dr. J. K. Bauduy, of St. Louis, a paper on "Alcoholism." Dr. Bauduy made the point that with an old toper, alcoholic beverages are not stimulative, but sedative, and that the condition known as delirium tremens is not set up by the cessation from the use of such beverages, as the old-time theorists maintained, but is due to their excessive use.

Dr. Sensenay, of St. Louis, exhibited an instrument of his own invention for holding the speculum, dispensing with the aid of an assistant—male or female—in uterine examinations, which seemed to strike most of the delegates favorably.

ELECTION OF

OFFICERS.

At this point, the scientific dissertations being ended, the Committee on Nominations submitted its report, which was unanimously adopted. It named the following roster of officers for 1888 and 1889:

President, George J. Cook, M. D., of Indianapolis; Vice-Presidents—J. D. Griffiths, M. D., of Kansas City; J. A. Larabee, M. D., of Louisville, Ky.; Secretary,

R. L. Thompson, M. D., St. Louis; Treasurer, W. C. Chapman, M. D., Toledo, O.

Credentials Committee—C. S. Bond, M. D., Richmond, Ind., Chairman; A. W. McAllister, M. D., Columbia, Mo.; L. S. McMurtry, M. D., Danville, Ky.; C. G. Comegys, M. D., Cincinnati; D. S. Booth, M. D., Sparta, Ill.

Judicial Committee—J. L. Gray, M. D., Chicago; W. W. Bailey, M. D., Louisville; C. R. Early, M. D., Ridgeway, Pa.

A. M. Owens, M. D., of Evansville, Ind., the wit and wag of the Convention, was made Chairman of the Committee of Arrangements, and Evansville was named as the place of meeting of the Convention in 1889. Dr. Owens promised the Convention hospitable treatment when they came “to the little side-tracked city in the pocket of Indiana,” an announcement that was received with vociferous cheers.

The new President, Dr. George J. Cook, was escorted to the platform by Dr. Thacker, of Chicago, and made appropriate acknowledgement of the honor conferred.

CLOSING WORK.

Dr. I. N. Love, of St. Louis, introduced a resolution, which was unanimously adopted, providing for the appointment of a committee consisting of one member from each State west of the Alleghany Mountains to formulate a plan of State organization for the association, and for the co-operation of the Mississippi Valley Medical Association with such State associations in all matters relating to the advancement of medical and surgical science.

Dr. A. P. Waterfield, of Tennessee, and Dr. J. A. Larrabee, of Louisville, submitted a resolution, which was adopted, declaring it to be the sense of the association that infection or cause of yellow fever on the Southern border can be stamped out if attacked in time; that it may become a fixture unless resolutely controlled; and that Congress should recognize the National Board

of Health and make adequate appropriation to fight the scourge.

Dr. I. N. Love then made his final report as Chairman of the local Committee of Arrangements, inviting the association to a carriage drive and banquet at the Jockey Club House at the Fair Grounds, and to the Exposition and the enjoyment of Gilmore’s Band entertainment in the evening. Whereupon Dr. J. C. Culbertson, of Cincinnati, moved a vote of thanks to the committee, and especially to its Chairman, Dr. Love, for the ample provision made for the comfort and enjoyment of the Convention. The resolution went through with a whirl, and Dr. Love bowed his acknowledgements. His associate committeemen are: Drs. N. B. Carson, J. R. Lemen, Henry H. Mudd, Spencer Graves, Frank R. Fry, H. C. Dalton, Young H. Bond, A. H. Ohmann-Dumesnil, H. Tuholske, Robert L. Thompson, R. M. King and A. H. Melsenbach.

Dr. Dudley S. Reynolds, the retiring President, who created a most favorable impression by his fairness and his exact observance of established routine, then thanked the Convention for its generous treatment of himself, and following this acknowledgement the association adjourned *sine die*.

THE DELEGATES

ENTERTAINED.

Carriages being ready at the door of the theatre the entire Convention was conveyed to the Fair Grounds, under escort of the Committee of Arrangements, assisted by Mr. J. W. Lambert, where a fine banquet was served and the following toasts happily responded to: “The Association of 1888,”—Dr. Dudley S. Reynolds, Louisville. “The Association of 1889,”—Dr. George J. Cook, of Indianapolis. “One of the Smaller Cities of the Valley,”—Dr. Tefft, Springfield. Mo. “The Queen City,”—Dr. J. C. Culbertson, Cincinnati.

"Chicago: Another of the Small Towns,"
—Dr. S. S. Bishop, Chicago.

"Kentucky: The Land of Fair Women,
Fast Horses and Fine Whisky,"—Dr. John
A. Larrabee, Louisville.

"The Country Doctor,"—Dr. D. S.
Booth, Sparta, Ill.

"Medical Journalism,"—Dr. G. Halley,
Kansas City.

"Eloquence in the Medical Profession,"
—Dr. J. M. Mathews, Louisville.

"The Heart of the Profession in the
Mississippi Valley,"—Dr. Thomas B. Har-
vey, Indianapolis.

"The Ladies,"—Dr. N. Guhmann.

Other toasts were responded to by Drs.
J. C. Gray, of Chicago, Wm. Porter, of St.
Louis, and others.

After the banquet the party came back to
the city and visited the Exposition.

Thus ended one of the most profitable
medical society meetings it has ever been
our good fortune to attend. We cannot
but predict for the Mississippi Valley Med-
ical Association a future of the very greatest
usefulness to the medical profession, to the
cause of scientific culture and of benefit to
the people.

CONGRESS OF
AMERICAN
PHYSICIANS
AND
SURGEONS.

Held at Washington, D. C.,
September 18, 19 and
20, 1888.

According to previ-
ous arrangement the
meeting was called to
order at 1 P. M., in
the Grand Army
Building.

Dr. William Pep-
per, Chairman of the
Executive Committee,

announced that the Congress should meet
triennially; that the selection of the presi-
dent of each Congress shall be entrusted to
the executive committee then in office.

Close study of the conditions of this Con-
gress has led the committee to feel, that if
this organization should have the effect of
favoring the multiplication and subdivision
of special societies, it would be nothing less
than a calamity. The executive committee

therefore provided for the admission of new
associations by the unanimous vote of the
committee only.

Dr. Billings then took the presidential
chair and delivered a brief address.

An address of welcome was delivered by
Dr Samuel C. Busey, of Washington.
After which the following by-laws were
adopted:

1. This organization shall be known as
the Congress of American Physicians and
Surgeons.

2. It shall be composed of National As-
sociations for the promotion of medical and
allied sciences,

3. It shall hold the sessions tri-annually
in the City of Washington, D. C.

The officers of the Congress shall be a
president, a vice-president, a secretary, a
treasurer, and an executive committee.

5. The president shall be elected by the
executive committee, of which he shall ex-
officio be a member. He shall preside at
the sessions of the Congress. He shall
deliver an address.

6. The presidents of the participating
societies shall be ex officio the vice-presi-
dents of the Congress.

7. The secretary and treasurer shall be
elected by the executive committee. They
shall be ex officio members of the executive
committee.

8. The executive committee shall be
composed of one member from each parti-
cipating society; and said member shall be
elected by the various societies at the next
annual meeting subsequent to the Congress.
It shall be charged with all duties pertaining
to the organization of and preparation for
the ensuing Congress, including the election
of all officers, and of a committee of arrange-
ments. It shall superintend the publication
of the Transactions of the Congress.

9. The expenses of the Congress shall
be divided between the participating socie-
ties in proportion to their membership.

10. The admission of new associations
to participation in the Congress shall be by
unanimous vote of the executive committee.

PROGRESS

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DUDLEY S. REYNOLDS, A. M., M. D., EDITOR.

THOMAS C. EVANS, M. D., ASSISTANT EDITOR.

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VOL. III. LOUISVILLE, OCTOBER, 1888. No 4.

THE CASE OF FREDERICK THE NOBLE.

The fierce controversy now raging between Sir Morell McKenzie, and the court Physicians at Berlin

has, unfortunately, been addressed to the public, instead of a *committia medicorum*. The German people will almost certainly believe Professors Gerhardt and von Bergmann when they say that McKenzie is incompetent, unskilled, and tricky. The whole English nation will say that McKenzie's book demonstrates the ignorance of the most renowned German surgeons, and readily explains the oft-repeated desire of the late Emperor for McKenzie's services. The probability that "Frederick the Noble" might have fared better in charge of a concurrent medical council is forced upon the minds of all unprejudiced persons competent to weigh the evidence.

To those who have read the German attack and the wiley Englishman's defense, it is evident: 1st. That the patient had a tumor on the left vocal cord. 2d. The galvanocautery was applied *every day* for about a week, and the tumor still remained with an increasing swelling, which began to embarrass the patient's respiration. 3d. At this stage the patient expressed a desire for the opinion of McKenzie. He responded to the call,

and, after consultation, expressed the belief that the *status præsens*, and the clinical history did not warrant a positive diagnosis. 4th. A portion of the tumor was removed with forceps and submitted to Virchow, who said it was not magignant. Great professional jealousy was aroused at this apparent contradiction of the diagnosis of the local (Berlin) physicians. McKenzie became conspicuous for his conservatism, and was knighted by the patient's mother-in-law. 5th. From this moment the patient was under cross-fire of the German and English crowns, the doctors on both sides being backed by the home Government.

The death of the patient precipitated the unfortunate attack of the German physicians, which has led to McKenzie's reply.

A Kilkenny cat fight, with the usual amount of sensational interest, is assured in the amiable disposition of Prince Bismarck and his mercurial young chief, the present Emperor, on the one side, and that unassuming old lady, the Queen of Great Britain and Ireland, with her meek little Prim Minister Saulsbury on the other. Bergmann said it was cancer; McKenzie said it might be, but the evidence was not conclusive. The patient is dead; the post-mortem examination has shed no new light upon the subject.

If McKenzie wounded the patient's right vocal cord in attempting to seize the tumor of the left with his forceps, no post-mortem appearances are described in corroboration of the charge.

Necrosis of the cartilaginous walls of the larynx with an open ulcer, followed by tracheotomy, and a false passage in attempting to insert a tube, with subsequent improvement in the patient's general condition, looks like some other lesion must have caused death.

Was there *pneumonia*? Did stenosis occur before death? Had the tumor incorporated the contiguous tissues into its own substance? Was it in fact sarcoma, epitheima, or any other recognized form of malignant growth? All these questions remain unanswered so far as any published accounts tend to show.

The whole matter is now beyond the reach of further intelligent professional discussion, and it is to be hoped pamphleteering will cease.

PUBLISHER'S DEPARTMENT.

ROGERS-TULEY COMPANY, Publishers.

Address all matter relating to this department to the Publishers, 235 and 237 Third Avenue.

The Publisher's Department of PROGRESS is designed to afford the Business Editor proper space, in the regular order of our system of classification of the text, for such notices and comments as he may feel inclined to make of meritorious articles, and such items of news as may seem to him best calculated to interest the readers.

No house will, therefore, be able to purchase space in this department.

FRY'S COCOA.

We are in receipt of sample packets of Fry's Malted and Concentrated Cocoas, which we have thoroughly tested.

The result of our examination substantiates the claim made for them by the manufacturers, J. S. Fry & Sons, Bristol, England. They are absolutely pure, and are possessed of wonderful nutritious value.

To the invalid and those with impaired digestion, and to mothers with nursing babies, they are of special value.

These preparations have been manufactured in England for over a century and a half, and are the finest we have ever seen. They deserve the attention of the medical fraternity of this country, as well as of England.

DIETETIC NOTES.

LAMBERT PHARMACEUTICAL COMPANY, St. Louis, has had prepared *Dietetic Notes* suggesting the articles of food to be allowed and prohibited in several diseases in which their Lithiated Hydrangea has proven of special service. A neatly bound book of these dietetic notes, each note perforated for the convenience of physicians in detaching and distributing to their patients, will be sent free of cost; together with an illustrated treatise upon Catarrh and other monographs of more than ordinary interest bearing upon the value of Listerine in the internal and external antiseptic treatment of disease.

CHRONIC
SYPHILITIC
SALIVATION.

A. W. Furber, M. D., L. R. C. S. and L. D. S., says: I have for a long time had a gentleman patient under my care for disease of the teeth, and although my operations progressed favorably, I had many difficulties to contend with. The whole of my patient's teeth appeared to have a syphilitic taint, and with increased flow of saliva, amounting to chronic salivation. These were not the only troubles I had to surmount; but that which retarded my work most was the repeated recurrence of syphilitic ulcers of the sulcus and gums generally, which, though not painful to my patient, was still a source of considerable discomfort and militated greatly against the success of my operations. IODIA having come under my notice, I was inclined to give it a trial, and with the addition of a small proportion of liq. hydrarg. bi-chlor., taken daily before meals for a time—also used occasionally as a mouth wash—the salivation became normal, the mucous membrane assumed a more healthy state and the teeth generally looked like coming back to their original color.

80 Fortress Road, London, N. W.

ADJUSTING
SPECTACLE
LENSES.

The question of properly grading spectacle lenses is agitated occasionally in the medical societies. The necessity for having a good quality of crown glass out of which to construct lenses is second in importance only to the accuracy with which they are set in the frames. To provide against the dangers of this class Mr. John W. Cook, the optician, employs the improved form of Snellen's phokometer for measuring the lenses and for centering them in the frame. He is, therefore, prepared to fill prescriptions with extraordinary accuracy and to insure the best quality of lenses.

PROGRESS

A Monthly Magazine for Students and Practitioners of Medicine.

"I HOLD EVERY MAN A DEBTOR TO HIS PROFESSION; FROM THE WHICH AS MEN OF COURSE DO SEEK TO RECEIVE COUN-
TENANCE AND PROFIT, SO OUGHT THEY OF DUTY TO ENDEAVOUR THEMSELVES, BY WAY OF AMENDS, TO BE A HELP AND
ORNAMENT THEREUNTO. THIS IS PERFORMED, IN SOME DEGREE, BY THE HONEST AND LIBERAL PRACTICE OF A PROFES-
SION; WHEN MEN SHALL CARRY A RESPECT NOT TO DESCEND INTO ANY COURSE THAT IS CORRUPT AND UNWORTHY THEREOF,
AND PRESERVE THEMSELVES FREE FROM THE ABUSES WHEREWITH THE SAME PROFESSION IS NOTED TO BE INFECTED; BUT
MUCH MORE IS THIS PERFORMED, IF A MAN BE ABLE TO VISIT AND STRENGTHEN THE ROOTS AND FOUNDATION OF THE
SCIENCE ITSELF; THEREBY NOT ONLY GRACING IT IN REPUTATION AND DIGNITY, BUT ALSO AMPLIFYING IT IN PROFESSION
AND SUBSTANCE."—BACON.

VOL. III.

LOUISVILLE, KY., NOVEMBER, 1888.

No. 5

GENERAL MEDICINE.

WHAT IS IT?

BY

DAVID S. BOOTH,

M. D.

OF SPARTA, ILL.

Read to the Mississippi Val-
ley Medical Association at
St. Louis, September 27,
1888.

In the reporting of the following case I give you nothing new, strange or startling, because you are all students, not only of medical literature, but at the bed-side and in the dead-house. Many cases similar to

this can be found reported in medical works in all parts of the civilized world, and as history repeats itself, many others will be recorded. But while the case is of little general interest, yet it had at the time of its occurrence a local interest that caused great excitement in the town where it occurred, owing to some of the symptoms—which the good people declared belonged to but one disease. This excitement was intensified by a medical man, not connected with the case, but an enemy of the physician in charge of the patient, who at every opportune moment declared the boy feigning and advised the use of the rod as the remedy. This state of affairs tended to intimidate the attending physician, who wisely kept his own counsel or opinion, although he had formed an opinion which was nearly correct. Here was a triangulation of opinions and interests, fear, hate and justice, to be arbitrated by a fourth party ignorant of the true state of affairs until after he had clearly, calmly and impartially weighed every symp-

tom with every fact that could be used bearing upon the case, to make a correct diagnosis.

At this juncture the writer was summoned to the case, totally ignorant of anything, only the wild rumors among the populace.

On the morning of January 31, 1886, I was called to the bed-side of Johnny Doak, aged 9 years, who had been in fair health until January 26, 1886, when Dr. C. M. Campbell, of Marissa, Ill., was called. Dr. C. found his little patient in a severe paroxysm, in which the patient appeared unconscious, with jaws clinched, countenance distorted, eye-lids closed, pupils respond imperfectly to light, skin of face pale, spasmodic contractions of body and extremities, assuming almost every conceivable form, pulse nearly normal, some difficulty in swallowing and at times not possible, respiration rapid and labored. The paroxysms appeared to give warning enough to the patient to cause him to fall or lie down without injury, although the doctor informed me that, sitting or standing, he would close his eyes, fall over into a swoon, and then the fit would immediately follow, passing from tonic to clonic spasms, and finally passing off. In time of the convulsions he would howl, growl, bark and bite, striking with his hands closed or open. Johnny was born out of wedlock, but his parents were well known and represented as unusually healthy. The only evidence of Johnny being out of health prior to this first attack was that he had complained of some pain

in his left side, following the course of the respiratory nerve of Bell, and a little uneasiness in his stomach and bowels. Dr. C. informed me that Johnny's pulse never ran above 82, temperature normal, that the barking and snapping was very marked at times. While he did not cry or laugh, he at times sobbed or groaned. The patient's bowels were regular and kidneys acted healthily, urine had been analyzed for albumen, etc., but nothing abnormal had been found; never had passed any worms, no phymosis or paraphymosis, no hypersecretion of glandula tysoni, in fact, nothing abnormal about the generative organs perceptible on inspection, and no evidence of masturbation; no paroxysms at night, or wetting of the bed. The paroxysms lasted from twenty minutes to two hours. When the paroxysms passed off he returned to consciousness with but little complaining, although at times he complained as above stated, and once he complained of pain in his head. His convulsions returned irregularly and the patient said he had no warning of their approach. This I rather doubt, as he at no time sustained any injury, although he would have several paroxysms a day, and many of them severe. I found him of average physical and mental development, answered my questions without any disposition to evade or hold back anything. He had no fright or bad treatment of any kind, in fact, he was an over-indulged child, owing to the fact that he had been adopted into a family that had lost all their children before taking him to raise. But in the last few months a child had been born into the family, and this might have had something to do in exciting the convulsions, as the infant would receive a great deal of attention, which aroused a jealous feeling that it would eventually receive all of the affection that he felt he should have. His eyes were unusually prominent, with a dull, sleepy look, and slight ptosis of upper lids. He was bright and quick to answer questions. A nail

penetrated the sole of his foot something over two years before these seizures, but there was no pain at the cicatrix or along the course of the nerves, no rigidity of the muscles of the face, neck or back, no positive aura or globus or chius, yet at times there was evidently spasm of the glottis sufficient to interfere with respiration and the drinking of fluids, and also playing a part in the production of the sounds or noises made by the patient. The hysterogenic points were found below the left nipple, over left spermatic cord and testicle. He took a glass of water from my hand without hesitation, and carried it to his mouth steadily and regularly, without fear or dread, drinking with ease; the bright surface of my watch did not change his features any more or in a different manner than it would have done to the healthiest child of his age. These tests with the symptoms given and found by me negatived chorea and hydrophobia, and no lyssi discoverable in the buccal cavity; patient never bitten by a dog.

Two years and more had intervened from date of injury to time of convulsions. There was no marked dyspnoea, no tenderness upon firm pressure over the sternum, no painful traction of the ensiform cartilage. no trismus only spasmodically, no risus sardonicus, no sudden shock could be discerned, and sleep not disturbed, had not taken strychnia or any of its derivatives. The symptoms present and those not in existence, with the want of the exciting causes, traumatism, shock, mental, physical or meteorological causes, negatived tetanus. "In the surgical wards of the Mayo Hospital, Calcutta, within a period of five years, 83 cases of tetanus were treated. Of these 44 cases were traumatic and 24 died. Of the remaining 39 idiopathic cases ten died."¹ While it would be an easy matter to make similar quotations from every medical and

¹ See Dictionary of Medicine, by Quain; page 1810, foot note. Consult Nicholas Serus, *Medical and Surgical Reporter*, February 13, 1886.

surgical writer that treats of the disease fully, I make this one for a single reason, *id est*: The ignorance that I found among physicians in discussing the above case, as to the etiology of tetanus, they contending that traumatism was the only factor in its causation.

"A little learning is a dangerous thing;
Drink deep, or taste not the Pierian spring;
There shallow draughts intoxicate the brain,
And drinking largely sobers us again."

The symptoms, present and absent, negated simple epilepsy or pure epilepsy, catalepsy or eclampsia, from irritants within or without, simple meningitis or cerebro-spinal meningitis. Dr. C. had given purgatives, anthelmintics, etc., before I became connected with the case, fearing that the convulsions were reflexed from the stomach or intestines. I had the opportunity to see and study one paroxysm, which occurred after I had left the house, but as I was not far away and was immediately summoned to return, I had an excellent opportunity to study this seizure, but as I have given a general description of his symptoms, and this being similar, I shall only add a few points and tests noted by myself. I watched the patient for several minutes, noting the features, decubitus, skin, eyes, character of convulsions, impression made upon the patient by the sympathy of the friends and bystanders, searched for hysterogenic points, not by violent tests, but principally by finesse or strategetic means. I was forced to the conclusion that in the tonic stage he was probably unconscious, but in the clonic stage he was conscious, and influenced by the anxiety and sympathy of his friends. After studying his case for some time I made firm pressure over the left spermatic cord, at the same time grasping the left testicle, and the convulsions suddenly stopped. This fact, coupled with the history and symptoms, appeared to my mind to settle the diagnosis. One fact I forgot to mention, or rather overlooked in my notes; Johnny had had spasms when he was about

three years old in connection with intermittent fever, that yielded promptly to treatment for said disease. As Johnny was charged with feigning disease, I am forced to give it a respectful hearing in reporting his case. To feign disease successfully the person requires to be familiar with the principal symptoms of the disease that he imitates. Our patient was not a Dr. Calmeil, who so closely imitated epilepsy that Esquirol, after a careful examination turned to Dr. Trousseau, declaring the case to be one of genuine epilepsy; and in the face of this case in the hands of experts, Trousseau declares that it cannot be imitated perfectly, as some of the phenomena cannot be produced at will. His age and the want of cause, as well as the lack of knowledge of disease, were against his feigning disease. He was not like Ulysses, a young bride to leave; or Pope Julius III, no consistory to hold. Jealousy is the only mental or moral factor that could be thought of for a moment as an exciting cause, and this is all a surmise, as there are no facts warranting the consideration of this as a cause. The adopted parents, friends and patient all declared that he received the same kind care, consideration and attention as he did before the birth of the babe.

In the diagnosis of disease I find too many of my professional brethren lean on one symptom as pathognomonic, one cause, one symptom and one remedy. The barking, growling, howling and biting tendencies of this little patient caused the populace to believe it to be a genuine case of hydrophobia, and the difficulty, as well as the impossibility at times to swallow, confirmed them in their belief. There was not at any time any dread of fluids, but a simple dysphagia, and this only temporarily, a symptom that occurs in a number of diseases of even a nervous character, as hysteria, etc.

This patient being a child, and a male, and only nine years old, not precocious so far as the development of the generative organs was concerned, or in other words,

had not reached puberty, care and great caution had to be used in arriving at a diagnosis, and it was thought safer to reach final conclusions by a negative course. Physiologists teach that there is a spasm center and that it is situated in the medulla oblongata, just where it joins the pons, which when stimulated causes general spasms. When convulsions are not of central origin, there must exist a want of equilibrium between the receiving and discharging center. But even a strict search for the *fons et origo mali* is futile, and we are left at sea without rudder or anchor. We are taught that opposites frequent produce like result, e. g., too much, too little, or impure blood in the brain frequently give similar symptoms, and it requires close study and nice discrimination to make a satisfactory diagnosis, and upon this the treatment hangs.

Spasms alone are only symptoms, not the disease, they being simply finger-boards pointing to a perturbation or derangement in the spasm center, which may be central or peripheral, e. g., high temperature, ptomanes, irritants within or without, etc., one or more playing a part in causation. To make these points clear and tangible, I ask your indulgence that I may quote from Landois L. Stirling's Human Physiology, second edition, pages 702 and 703. "The center (spasm) may be excited by suddenly producing a highly venous condition of the blood ('asphyxia spasms' in cases of drowning in mammals, but not in frogs) by sudden anemia of the medulla oblongata, either in consequence of hemorrhage or ligature of both carotids and subclavians (Kussinaul and Tenner), and lastly, by sudden venous stagnation, caused by compressing the veins coming from the head. In all these cases the stimulation of the center is due to the sudden interruption of the normal exchange of the gases. When these factors act quite gradually death may take place without convulsions. Intense direct stimulation of the medulla, as by sudden destruction, causes general convulsions.

The center is affected in extensive reflex spasms, e. g., in poisoning with strychnine and in hydrophobia. Many inorganic and organic poisons, most cardiac poisons, nicotine, picrotoxine, ammonia and the compounds of barium cause death after producing convulsions by acting on the spasm centre. If the arteries going to the brain be ligatured so as to paralyze the oblongata, then on ligaturing the abdominal aorta, spasms of the lower limbs occur, owing to the anemic stimulation of the motor ganglia of the spinal cord." Schroder von der Kolk found the blood vessels of the oblongata dilated and increased in cases of epilepsy. Brown-Sequard observed that injury to the central or peripheral nervous system (spinal cord, oblongata, peduncle, corpora quadrigemma, sciatic nerve) of guinea-pigs produced epilepsy, and this condition even became hereditary.

Simple hysteria is sometimes feigned, but in this case the compound character of the disease, the age of the patient, and the want of opportunity to study and imitate the disease successfully throws feigning out of consideration. Rosenthal says that the diseases with which tetanus are most frequently mistaken are spinal meningitis, catalepsy, hysteria, hydrophobia and spasm of the muscles of mastication. The wonderful mimetic character of hysteria is admitted by all medical authorities, and when blended with epilepsy its diagnosis in a male child becomes more difficult, even by exclusion.

In conclusion I desire to say that the following diseases or conditions were duly considered before venturing to make a diagnosis of Johnny's case; hydrophobia, feigned diseases of the convulsive type, chorea, tetanus, eclampsia, hysteria, hysterio-epilepsy (hysterical tetanus or grave hysteria of Charcot).

Hysterio-epilepsy in the male is very rare, but does occur. Richer records, from the practice of Charcot, a case of convulsive hysteria, developed in a lad of twelve years.

(See the *American Journal of the Medical Sciences*, Oct. 1881, page 392, art. Hystero-Epilepsy, by Charles K. Mills, M. D.)

I have found quite a number of cases similar to this in looking up the literature of the subject.

I diagnosed this case as epilepsy with hysterical complications or symptoms, or hystero-epilepsy of Charcot.

And, as stated by Prof. Larrabee when discussing the paper before the society: The mental perturbations during the mother's gestation, consequent upon her illicit condition, coupled with a hereditary predisposition to epilepsy which, although not directly shown actively in her, might have left a deeper impress upon her offspring, that slighter exciting causes would fan into action. Atavism will apply here as well as in other diseases, and the direct impress of the mother might be excluded only so far as carrying the fomites or fuel.

All mankind have weak spots, physically as well as spiritually; none being built on the plan of Dr. Holmes' "One Horse Chaise," or at least, so few that they are simply the exceptions to the rule.

I enclose an excerpt from the St. Louis *Globe-Democrat* of Sept. 22, 1888, clipped from said paper a few days before our meeting, but after I had written my paper. If you can use it in connection with this paper, of course do so. Also permit me to quote from the Chicago *Medical Standard* of Oct. 1888, page 127, a comment upon the case reported in the *Globe-Democrat*:

"A fourteen-year-old boy barked, frothed at the mouth and bit carpets and chairs. He became violent, went into a frenzy at the sight of water, and had a convulsive seizure. Drs. Schultz, Pertle and Spiegelhalter pronounced the case fatal hydrophobia. The patient passed into a stupor. He then became conscious, survived the diagnosis and fully recovered. In all probability the case was epilepsy of the type described by Kiernan (*Amer. Jour. of Neur. and Psych.*, 1882) and others." Also St. Louis *Medical and Surgical Journal*, Sept. (received Oct. 4, '88), 1888, page 143, art., "Was it Epilepsy?"

ACUTE

TUBERCULOSIS.

BY

T. B. GREENLY,

M. D.,

WEST POINT, KY.

Read to the Hardin County Medical Society, September 8, 1888.

On July 23d, 1888, I was called to see Jno. Welch, a beautiful and unusually sprightly boy of 8 years. Some two weeks before he had quite a profuse hemorrhage from the lungs, and in a week subse-

quently a second hemorrhage occurred. In these attacks my friend, Dr. Reesor, of Stithton, saw him, and under whose treatment the child seemed to be relieved. A few days before I saw him his grandmother had him taken to her house, seemingly relieved, but yet weak. On the morning of the 22d of July, about 4 o'clock, he was found in bed with a severe chill on him, which lasted a couple of hours. When I saw him on the 23d his temperature was 104° F., with quick pulse, partly due to loss of blood. The left lung was inflamed throughout—first stage of pneumonia, with brick dust sputa and fine crepitant rale prescribed.

R Quininae Sulphatis. aagrj.
Ammonii Chloridi.
Pulveris Doveri grji.

Every 4 hours, with gtj. tinct. aconite and gtjii. tinct. gelsemium. Flaxseed meal poultice over left lung.

24th. Temp., 103°; pulse, 130. Hepatization commencing. Continued treatment.

26th. Temp., 102°; pulse, 130. Hepatization complete. Same treatment.

27th. Temp., 100.5°. Condition about same; takes some nourishment. Left off aconite and gelsemium. Continued other treatment.

29th. Temp., 99.5°. Can discover crepitant redux here and there over lung. Treatment continued.

Hoping resolution would now progress favorably, I did not visit him again until August 4th, when I found him with temperature 103°, with no advancement in resolution. I was now apprehensive of either

formation of abscess or tubercularization of the organ. I continued quinine and ammonia in small doses, with grs. ji antifebrin at intervals of six hours, to control high temperature. For his cough I gave him syrup of tinct. gelsemium. Counter irritation over left lung.

Aug. 6th. Condition about same. Temperature slightly reduced under antifebrin, being 102.5° . Treatment continued.

Aug. 10. Temp., 103° . No change in condition of lung—only can hear some air passing into cells in different portions of the organ, giving out the sounds of crepitus *redux*. Am satisfied now that the lung is in a state of general tuberculosis. Treatment continued.

Aug. 13th. Temp., 103° . No improvement in condition of lung—patient becoming weaker and losing appetite. Heart losing force. Treatment same, with the addition of digitalis to the cough medicine.

Aug. 16th. Temp., 103.5° . Patient growing weaker and less peart. Very little appetite for food. No change in condition of lung—except here and there a small space apparently more resonant. Treatment same.

Aug. 20th. Temp., 103.5° . No change, except patient growing weaker. Continued treatment. Informed his grandmother that the case was hopeless, and that treatment could do him no good; that I was fully convinced the child was dying of pulmonary consumption.

I did not see him again, but occasionally heard from him. He lived until the 26th of August—six days after I last saw him. He became quite emaciated, gradually wearing out from the effects of persistent high temperature.

My special object in reporting this case is on account of the peculiarity of some of the symptoms. In the first place, hemorrhage was the first indication of impairment of health. The boy had enjoyed very excellent health up to this time, although his family record on his mother's side was not good. His mother and some aunts and

uncles having died with tuberculosis. Although it occasionally happens that hematemesis occurs as apparently the first symptom of tuberculosis, it usually supervenes upon already existing premonitory indications during the first stages of the disease. It is very rarely we have hemorrhage in consumption of children. I am in my forty-fourth year of practice and, so far, have seen but this single case. I have also inquired of some of my confreres, and have not heard of a case. Authors on the subject of consumption say it is very rare.

In this case the disease made very rapid progress—the patient living only about seven weeks from the time of the first hemorrhage. The only way we can account for its very rapid advancement is the fact of his taking pneumonia, and, owing to the hereditary disposition to the disease, the lung failed to recover its normal condition and was completely destroyed by that character of inflammation which accompanies tuberculosis.

WHAT IS FILTH?

In an article on the diagnosis, prognosis, and treatment of Yellow Fever, read to the Florida State Medical Association, Dr. John P. Wall says: "The matter of early diagnosis is a most important one in our Southern cities and towns as it is generally conceded, and my own experience tends to confirm this view, that if the first case, (or cases), is recognized and the proper measures of isolation and disinfection are instituted an epidemic may be prevented, especially in places whose atmosphere is not vitiated with miasmatic exhalations from accumulated filth."

Now supposing there are no sewers; all excrement from man and beast deposited upon the surface of the earth or conveyed into the earth through some pit; whilst garbage and kitchen slops are thrown out upon the surface of the earth at the very door of the house, and the stench is so great as to nauseate strangers who pass through such localities: and, supposing this all exists in a small town, does Dr. Wall consider these conditions, without reference to the water supply, to propagate Yellow Fever?

SIMPLICITY AND
ACCURACY IN
THERAPEUTICS.

BY

W. T. THACKERAY,

M. D.

CHICAGO, ILLS.

Read to the Mississippi
Valley Medical Associa-
tion at St. Louis, Sept. 26,
1888.

At the meeting of the American Medical Association at Cincinnati Prof. Roberts Bartholow read a paper of similar import and in a great many instances used almost the exact words of the paper I shall read to you.

I mention this fact as showing that the minds of the profession are running in like channels toward the goal of greater simplicity and accuracy in therapeutics. Dr. Bartholow however denied the scientific accuracy and deductions of Dr. Burggræve in his system of alkaloid medication, at the same time the only arguments he used in favor of his propositions were taken wholly from Burggræve. I, on the contrary, while objecting to any designative name for the system, accord the full meed of praise to Prof. Burggræve for the valuable work which he has done and with this preamble I will proceed with my subject.

The student who has closely followed the numerous phases through which therapeutics has passed within the last two decades, can but view the title of this paper with a certain degree of surprise, mingled with skepticism.

This branch of the medical sciences, which in the dark ages of the healing art, absorbed all the others, and reigned supreme in the civilized world, like all other tyrannic rulers whose power rests only on apocryphal traditions, was dethroned, by the authority of a Triumvirate: Chemistry, Physiology and Pathology.

A new era was then inaugurated and empiricism, disabled by the encounters with science, step by step, has been compelled to yield the field of action.

Chemistry, indefatigable in its assiduous discoveries, day after day, brings forth new agents, which passing first through the

crucible of Pharmacology, are intrusted to the clinician, whose powers of investigation and discrimination are to be keenly exercised, before it is deemed useful and enters the dominion of the practice of medicine, or else it is discarded and consigned to oblivion.

Notwithstanding this, whether from misinterpretation of phenomena, taking the post hoc for the propter hoc, or from unscrupulous ambition to appear among the ranks of the experimenters, many an undeserving substance has found place in the arsenal of therapeutics, simply to increase its bulk, without adding to its material force. As a necessary consequence, the list of preparations enlarges day after day, contradictory statements as to their properties loom high in our literature, reports from practitioners of well merited credits, are at variance and a veritable chaos dominates the situation, whose legitimate fruits are either indifference or skepticism. The neophyte, on entering our schools, glances at the dark horizon of *Materia Medica* and Therapeutics, and horror stricken, either takes to his heels, or following the example of some of his predecessors, ventures into its night with a heavy heart, and almost hopeless of success.

How can it be otherwise? Let us take up our pharmacopœia, and count the various official preparations pertaining to two, only two important agents: Iron and Mercury. We find 41 preparations of iron, distributed as follows: 2 in metallic form, 1 oxidized, and 37 saline combinations. Of Mercury, we count 25 preparations: 6 metallic, 5 oxidized, 1 sulphuretted, 3 mercurious chlorides, 3 mercuric chlorides, 3 combined with iodine, 1 combined with cyanogen, and 3 oxidized, and combined with acids.

Of these two metallic substances alone, our pharmacopœia furnishes us with 66 different preparations, nearly each one, used in a different dose, and filling various indications. Now, if we figure up the

totality of officinal preparations, it reaches the sum of 542, named as follows: 16 alkaloids, 23 acids, 11 abstracts, 8 cerates, 4 collodiums, 2 confections, 2 decoctions, 1 elixir, 32 extracts, 79 extracts (fluids), 2 glycerates, 3 honeys, 5 infusions, 10 liniments, 3 masses, 11 mixtures, 5 mucilages, 5 neutral principles, 40 oils, (volatile), 17 oils (fixed), 2 oleates, 6 oleo-resins, 36 ointments, 15 pills, 9 powders, 7 plasters, 6 resins, 22 spirits, 26 solutions, 34 syrups, 16 troches, 1 trituration, 72 tinctures, 4 vinegars, 14 wines and 15 waters.

This monstrous list of agents, and many incongruent compounds which leave off a great many more, that are unofficial, constitute our therapeutic equipment, the weapons with which the practitioner sallies into the world to shield humanity from the ravage of disease. As the line of march is long and tortuous, the enemy numerous and treacherous, and the battles frequently fought with disadvantage; abandoning the field strewn with the victims, the medical man ponders over the inefficiency of his arms, and gradually discards many of them, until, deception following deception, shakes his remaining convictions as to the value of the rest.

Skeptics are thereby created, for superior minds alone, can cope and master the complex. To obviate these disadvantages, to simplify, and at the same time place therapeutics on a scientific basis, has been the aim of a great many physiologists, therapeutists, pathologists, and clinicians, among whom prominently figure, Claud Bernard, Flourens, Trousseau and Pidoux, Germain De See, Fonssagrives, Rabuteau, Gubler, Dujardin-Beaumez, Charcot, Jaccoud, &c., &c., but their efforts have been sterile in one direction, for, if on one hand they have made some useful discoveries, and established several laws, on the other they have multiplied our already too numerous therapeutic agents.

From a peculiar interpretation of morbid phenomena, some energetic spirits, and in-

dependent thinkers have been led to adopt new therapeutic means in accord with their views.

Brown, reviving Themison's doctrines on the conditions of "Strictum et Laxum" of the tissues, regarded disease as the result of hypersthenia, or hyposthenia and advocated stimulants, or relaxants, respectively. This theory found an echo in Italy, reverberated by Rasori and Tommasini, under the denomination of Contro-stimulism. Tartar emetic, in doses, gradually, increasing, was the chief agent of Contro-stimulation. Brissais, on the other hand, considered disease as provoked by a state of hypersthenia, and combatted it by bleeding to syncope.

Now comes the expectant school; Stahl bears the flag of truce between the dissenting theories; treads his path over heaps of victims, and at first, infatuated with the presumed success of his indolent medication—the dulce far niente—soon exhibits to humanity, that extreme action and torpid inactivity lead to the same end, though by different roads.

As after a severe cannonade, the atmosphere grows dense and foggy, to be cleared away by a rain-fall, so after these scientific struggles, an ominous cloud appeared on the sky over the town of Leipsic, in Germany, not to be dissipated by heavenly showers, but as the nucleus of our western cyclones, to gain in force and speed on its onward march, to destroy and annihilate the medical fraternity throughout the universe, and from their inanimate remains, phoenix-like, create a new sect, under an old banner newly patched, whereon the motto "*similia similibus curantur*," waves in the air. Hahnemann is the leader of this movement, and armed with the above pass-word, partly borrowed from Hippocrates, Antiphones, Paracelsus, Stahl, Haller, etc., gains entrance into Cullens' bulwark of *materia medica*, devours his stores of cinchona, until shivering from gastric irritation, like Archimedes,

out of the bath, he shouts "Eureka" "Eureka." The law of "like cures like" is definitely established; pathology loses its identity, and disease its horrors; symptomology assumes the dictature, and the remedy (not the medicine) becomes to the patient what the ambrosia was to the gods.

Yet, therapeutics is not simplified; no definite laws are given, and from the provings of the foster-father of medicine, and those of a legion of his sectarian results the most obscure confusion, whose escape is frequently obtained by the use of proprietary nostrums, highly antagonistic to the doctrines of their teacher. Homœopathy bases its success upon the power conferred on its remedies, by the processes of dynamization and attenuation, and these are carried to such extremes as to baffle all reasonable calculation. According to Hahnemann's rule, one hour's labor should be consumed in the trituration of 100 grs., or seventy hours of continuous work with mortar, pestle, and scraper, to make one pound (7000 grains) of trituration.

We admit that trituration develops the activity of medicinal agents, a fact which has been demonstrated in many instances, but our mind is too contracted to perceive the utility of infinitesimal attenuation, and infinitesimal dosage.

Of late, the resurrection of several more or less obsolete plans has taken place as attempts at a reform, some tainted with fraud, as clairvoyance, and others with bigotry and hypocrisy, as the Christian science, faith cure, metaphysics, etc.

Hypnotism, an off-shoot of mesmerism and somnambulism; a problem as yet unsolved by unbiased scientists, has undergone a new epoch of revivalism. The professional credit of a few of its adopters, brought some weight to bear upon the practitioners of all schools, and the expectations of many were carried so far beyond the realm of reality, that their downfall was much the more painful and humiliating.

The manipulation of the volition of the

patient, by the hypnotizer was said to be so thorough, that the mere exhibition of the vial containing the medicine indicated, was sufficient to heal disease, or in case of a toxic to provoke its pathological symptoms. Prof. Dujardin Beaumetz, has recently presented to the Academy of Medicine, a report which involves a criticism on all these facts, demonstrating with clearness that they were all based upon mere illusions, and errors in the interpretation of the phenomena observed; that the different phenomena pointed out by Suys, Bourru, Bourot, Fontan, Segard, &c., were produced as well with an empty vial, as with one containing a medicament substance, and furthermore, that the same agent produces in the same patient, effects absolutely different, so that if the experiments are repeated at intervals of a few days, the results are thoroughly inconsistent.

This report threw a dynamite bomb into the camp of the believers, causing great havoc and consternation.

The same occurred with the report of the committee, appointed at the same time that Mesmer was said to be working such miraculous cures in Paris. The illustrious American, Benjamin Franklin was a member of said committee.

It was framed in the following terms: "In regard to the existence and the utility of animal magnetism, they have come to the unanimous conclusion that there is no proof of the existence of the animal magnetic fluid, and that this fluid, having no existence, is consequently without utility, and that the violent effects which are to be observed in the public practice of magnetism, are due to the manipulations, to the excitement of the imagination, and to that sort of mechanical imitation which leads us to repeat anything which produces an impression upon the senses." In spite of the labyrinthic and controversial state of therapeutics, chemistry has not been idle for a moment; the most recondite products of nature are critically searched and analyzed, and

samples are constantly obtained from the most complex substances.

New alkaloids, synthetical products, alkaloidal mixtures, glucosides, metallic combinations, &c., are daily issued from our laboratories, and eagerly taken up by experimenters whose reports promptly appear in our periodical literature, thus enabling the studious practitioner to be posted on their physiologic and therapeutic actions.

As these agents, when chemically pure, are always of a well defined composition and must necessarily produce uniform and definite effects, save individual peculiarities, and as in a great many instances, besides various incidental causes of detriment, the crude drugs possess in their composition antagonistic elements, as in opium, morphine and thebaine; in convallaria majalis, convallarin and convallarmarin; in pilocarpus, pilocarpine and jaborine; in digitalis, digitaline and digitonine, &c., it is obvious that they are better adapted for the foundation of a system of therapeutics, provided that the risks of intoxication are well guarded against by a methodic plan of dosage.

To Dr. Ad. Burggræve, Professor Emeritus of the University of Ghent, Belgium, a robust spirit, even at an advanced age, well trained both as a teacher and a clinician, we owe the conception and organization of such a system under the denomination of dosimetric or alkaloidal therapeutics. In this system, the author utilizes the alkaloids, glucosides and their salts, metaloids, metals, metaloidal, metallic salts and concentrations; all in the form of granules, each representing a definite quantity.

Besides the foregoing agents, he employs others which are of usual administration in the ordinary therapeutics, such as mineral acids, chloral (in mixture) emollients, cathartics, chiefly Sedlitz salt, tincture of opium, (topically) poultices, &c.

Dr. Burggræve places the therapeutic agents in three distinct groups. The first, embraces those which contain one milli-

gramme of the active principle ($\frac{1}{120}$ gr.); the second, half a milligramme ($\frac{1}{240}$ gr.); and the third, one centigramme ($\frac{1}{10}$ gr.). The alkaloids and their combinations, occupy the first group, and among them, there are some, chiefly aconitine, daturine, and hyoscyamine, which promote physiologic and therapeutic effects, in doses still smaller than the aforementioned. The granules are administered, from one to four or five at a time, at intervals varying from 15 minutes to 2 or 3 hours, in acute diseases, until either physiologic or therapeutic effects are produced.

The precedence of the former, demands the discontinuance of the drug, or the lengthening of the intervals of administration. In chronic cases, the granules are given, two, three or four times a day, until effect.

In a great many instances the medicaments act according to the law of contraria and in others, they obey that of similia, similibus curantur. The same occurs with the regular medication, as was enunciated by Hippocrates.

When the indications are to be filled by more than one agent, they may be administered together if not antagonistic, or separately, as the circumstances require.

In infantile practice, the granules may be dissolved in milk, or water sweetened, if necessary, and each teaspoonful of the solution should contain the minimum dose adapted to the age of the patient. Generally from $\frac{1}{16}$ to $\frac{1}{2}$ granule.

In this, as in adult practice, the same rules are followed in regard to administration. Aconitine is the antipyretic par excellence, in this system of therapeutics, and the thermometer, the veritable index in its management.

The number of substances used, according to the latest publication: "Elements of Dosimetric Therapeutics by Dr. A. J. O. Castro," is limited to one hundred and four which represents but a small fraction when compared with that of the old method.

With these granules, many combinations may be made in capsules or in solution to fill the required indications.

The advantages of this system are manifold and involve important points of interest, both to the practitioner and the patient; the former is thereby enabled to dispense his own medicines, upon which he has learned to rely, and thus avoids loss of time, adulteration of drugs, stale preparations, errors of preparation, misdirections, duplication of prescriptions, and the loaning of them to friends.

The latter receives prompter attention, which means quicker improvement, economizes the druggists' bill, and ingests medicines, which by their trituration with sugar, are rendered less prone to disagree, or irritate the stomach.

ANTISEPTIC

PASTILES.

The necessity for an accessible compound at once mild, and efficiently antiseptic, in the treatment of nasal affections has long been recognized. Dr. Carl Seiler of Philadelphia, has suggested, in a communication to the *Medical Record* a practical solution of the problem. He says: "Formerly I used the ordinary Dobell's Solution for the spray, and also as a wash to be sniffed up the nose by the patient, morning and night, but within the last two years I employ instead a solution composed of the following ingredients: Sodii Bicarb., Sodii Bibor., Sodii Benzoate, Sodii Salicylate, Eucalyptol, Thymol, Menthol, Ol. Gaultheria, Glycerine, Alcohol and Water. This formula gives a solution which is sufficiently alkline to dissolve the thickened secretion adhering to the nasal mucous membrane, and as it is of the proper density, it is bland and unirritating, leaving a pleasant feeling in the nose. At the same time it is antiseptic and acts as a deodorizer, being in this respect far superior to Dobell's Solution or any other non-irritating deodorizer and antiseptic."

The editor of PROGRESS has found the new Pastiles convenient and in every way satisfactory in sub-acute and chronic cases. They are prepared by Frederick Brown, 5th and Chestnut streets, Philadelphia, to whom orders may be sent.

INFANT FEEDING.

BY

JOHN A. LARRABEE,

M. D.,

Professor of Materia-Medica and Therapeutics, and Diseases of Children in the Hospital College of Medicine, Louisville.

Remarks to the Mississippi Valley Medical Association, at St. Louis, Sept. 26, 1888. Reported for PROGRESS.

Civilization has its evils as well as its blessings. It is due to the former that "artificial feeding," which a few years ago may have been considered as an exceptional requirement, is rapidly becoming a necessity. None of the evils falling under

the observation of the physician are more important or alarming than this, that modern habits of culture in dress, exercise and diet are producing a deterioration in the sexual vigor and maternal accomplishments of our women. A casual glance at the number and variety of preparations of infant food; the extensive manufactories and the enormous capital invested will convince the most skeptic of the magnitude of the question presented to us to-day.

Were it not, Mr. President, that the discussion is upon the adaptation of these various foods to the infant, rather than upon the cause of such a demand, I might be tempted to indulge in some wholesome criticism which would more properly belong to the department of public hygiene.

The department of pediatrics, in this particular, affords abundant opportunity for those among us who may incline to eloquence, and I leave this as an inviting field upon which too much eloquence can not be expended.

It must be admitted by the profession that great excellence has been attained by some of the manufactories in approximating the analysis of their goods to the constituents of mother's milk; at the same time a perfect substitute has not been produced. Will such a substitute ever be attained?

The chemistry of the laboratory is one thing, and the chemistry in the living body is another and quite a different thing. The composition of the diamond is definitely

known, as also other precious stones and metals, but are we able to construct them out of their elements? The result of chemical therapeutics is anything but satisfactory in daily practice. The practitioner who treats his cases by the correction of certain morbid products in the urine, can not boast of his success in curing the diseased condition. No more can we expect by selection of foods presenting an exact chemical analysis, to nourish the child. Many, and perhaps all the artificial foods are capable of sustaining life. With the infant, however, another question presents: Not only must the balance of waste and repair be maintained, but there must be a large provision for building new organs and providing for growths of bone, nerve and muscle. Of all the substitutes for human milk within our command, none can excel the milk of the *healthy cow*; and yet this milk is designed to raise cows, and to this purpose is undoubtedly admirably suited, and the diet of the cow corresponds to the requirements of her offspring. There is a bare possibility that the brain of the infant man may require ingredients not found in grass and hay.

CONDENSED MILK.

It is difficult to reconcile the diametrically opposite opinions of nurses, mothers and physicians in regard to the value of condensed milk as a food for infants.

The prevailing medical opinion, I believe, is that while it is well up in saccharine properties, it lacks, to a certain extent, the requisite albuminoid materials for building tissue. I can certainly point with pride and satisfaction to scores of healthy infants in private and hospital practice reared entirely upon this article of food—"Borden's Condensed Milk"—with a combination of condensed milk, Mellin's Food and barley water, which I instruct my nurses to prepare. I have rescued many marasmatic infants from destruction.

I think these contradictory statements of

physicians may be harmonized if they will give personal supervision to the preparation of the food. The most exaggerated idea prevails among nurses and doctors as to the strength of condensed milk. A little will color and sweeten a great deal of water, and I have many times increased the quantity treble or quadruple where it was said to disagree, and with the very happiest result. The fact is, these infants were being starved to death on colored water. Milk is condensed only four times its bulk, and if three or four teaspoonfuls of Borden's Eagle Brand be used at a feeding the complaint as to lacking albuminoids will not prevail. I often feed a can of condensed milk in twenty-four hours.

A few days ago I was summing up for a mother the number of cans she had used in rearing a bright and handsome boy to the age of dentition and it amounted to 1,246 cans of Borden's. This and others similarly fed in the same family had no other food from birth. In cities, condensed milk possesses these advantages: it can be kept from contact with the air, it is more convenient, and if the water with which it is mixed has been previously boiled (as it should always be) it is to a great extent free from the dangers of microbes and the resulting alkaloidal ptomaines.

The wonderful revelations of the microscope have not alone benefited the surgeon; the department of pediatrics is reaping a full share of the benefits. Crudities and notions which have clung with tenacity to the nursery are being driven to the wall, and such explanations as dentition or the second summer, causing cholera infantum, will no longer hold. It is now known and definitely understood that without the introduction of germs from without these and many other passing conditions of the digestive tract are impossible. It has been a fact observed from time immemorial that immediate feeding from the udder of the cow secures the health of the calf, and that if the milk be taken and fed, after an interval

of exposure to the atmosphere, the same diarrhoea with green stools and ptomanic poisoning occurs in the calf as in the human offspring. The same infant with whom cows' milk disagrees may be successfully fed by having it milked fresh into its mouth or bottle. We used to explain this by saying that the oil globules were more intimately mingled; we now know better. All this has led to the sterilization of infants' food, especially in summer by heat in vacuo, for which the simple contrivance which I have constructed after that suggested by Prof. Soxhlet, of Munich, answers an admirable purpose.

Practically, I have found barley water prepared from "Robinson's Ground British Barley" a most excellent adjunct and diluent in infant feeding. In all cases of indigestion I suspend milk feeding for a short time and use this diluent until the intestines are freed from curds and until the stomach has, by rest rather than medication, recovered tone. A very annoying condition and a most distressing one to the infant, obtains in nurslings as well as artificially fed babies, is a true gastralgia. In these cases the trouble is maintained by too rich and heavy food. The infant begins to scream and fret so soon as it is fed or nursed. Barley water acts the part of a protective in these cases if fed preceding nursing or with the food, and the household as well as the baby enjoy a season of quiet. It is not generally known that too frequent nursing increases the redness of the milk, and thus the same results follow as in over-feeding with heavy food. There are other factors than the different foods recommended which enter into the explanation of the failure to nourish babies. Bottle-fed babies are generally *over-fed babies*. The bottle is found to be a very convenient stopper and is rammed into the mouth on the slightest pretext of fretfulness.

The danger of communicating infectious diseases through milk is greatly augmented by the use of bottles, besides the liability to

the formation of the deadly tyrotoxicon in the bottle.

WATER FOR BABIES.

It is strange that we should so far forget the pleasure we experience in a draught of cold water when we are thirsty as to deny this luxury to the infant; yet the greediness manifested by the baby when allowed a little water is evidence of its desire. Particularly is this true in the summer months when food, not required, is greedily swallowed to satiate thirst.

Nearly all the changes contributing to nutrition of the body depend upon the presence of chloride of sodium. Cell activity, osmosis and digestion are promoted by it. Some of the most terrible diseases and deaths have been due to its withdrawal from food of lower animals as well as of man. There is reason to believe that artificially fed babies require more salt.

In *sour babies*, with acid stool of green, pasty or cheesy character, I am very fond of using sodium phosphate instead of chloride; the taste is the same and it answers all the purposes of salt. These babies fill the apartment with an odor of lactic acid and are candidates for rachitis and rheumatism. A pinch of phosphate of soda should be put in each feeding.

Finally, Mr. President, in reply to the gentleman who has spoken so highly of antiseptic treatment of infantile indigestion, let me say one word: I am teetotally opposed to medication in infancy, and my efforts are leveled at the prevention of sepsis, therefore do not include antiseptic medication. There can be no fermentation without microbes, and if sterilization be carried out in the feeding, medicine or microbicides will be unnecessary, and the infant will be spared not only the medicine but the often fatal attack of choleraic diarrhoea. I thank you, Mr. President and gentlemen, for listening so patiently to my rambling talk upon a subject which deservedly occupies our attention more and more as we advance in civilization.

GENERAL SURGERY.

THE
NERVOUS
RECTUM.(?)

BY

JOSEPH M. MATHEWS,

M.D.,

*Professor of the Principles
and Practice of Surgery
and Diseases of the Rec-
tum, Kentucky School of
Medicine, Louisville.*Read to the Mississippi
Valley Medical Associa-
tion, at St. Louis, Sept.
26, 1888.

What I shall have to say in this paper is in answer to a learned dissertation by Prof. Wm. Goodell, read before the American Medical Association, (obstetrical and gynecological section), at the meeting in Cincinnati, May 8, 1888. The title used by Dr. Goodell was "The Nervous Rectum," but

the term most used in the article was *hysteria* or hysterical rectum. In other words the position taken was that certain muscles became hysterical. In explanation he says: "The mind is sane, the organic body is sound, the individual as a whole, is above reproach, and yet these muscles will behave as if they were bereft of reason." Further on he says: "The muscles most liable to become *hysterical*, are, perhaps, the circular ones, viz.: The sphincters of outlets or inlets, and while the insanity, so to speak, is more localized, the sufferings are perhaps greater." The term employed here "hysterical" rectum is, in my opinion, misleading, and while the importance of these applications cannot be overestimated, I am inclined to think that a caption as heads this article, "Some obscure affections of the rectum," is better for the elucidation of the subject than that employed by Prof. Goodell, for the reason that it invites investigation. I dare say, there is no physician here, but has had some patient complain to him of some vague symptoms of rectal disease, when such diagnosis was not borne out by an examination. But you will permit me to say that it is too often the custom to dismiss these patients without an examination. Webber defines hysteria to be "a diseased state of the *nervous* system, evidenced by an almost innumerable variety of symptoms."

It is commonly classed as a *functional nervous disease*, and has no recognized *pathological anatomy*.

Dr. Goodell says: "In this form of hysteria there are usually present, in my experience, some one of the protean symptoms of general nerve prostration, such as spine-aches and backaches, sore ovaries, weariness, wakefulness and nervousness. But the chief suffering, or the most exacting symptom, is referred to some portion of the rectal tract leading the physician to suppose that he is dealing with some coarse or traumatic lesion. The act of defecation then gives great suffering, followed by a painful throbbing which may last for hours. Patients thus afflicted so dread the suffering that they school themselves into habits of costiveness, and often become victims of opium eating."

This is a perfect description of this class of patients, many of whom would prefer death to living such a life, and we would not be stating the case too strongly were we to say that this condition will often end in actual insanity. But is Dr. Goodell correct when he says that one of these "may lead the physician to suppose that he is dealing with some traumatic lesion?" To state it more definitely, *is not* the physician really dealing *with* a traumatic lesion? and can a cure be effected upon any other hypothesis? Certain it is that if a lesion exists, the disease will not be cured until said lesion is eradicated, and, per contra, if no lesion exists then the methods used for its eradication are *nil*. Let me cite a few cases. The following was given in a paper to the Kentucky State Society, when I was discussing this subject:

"I have under observation a girl who has been treated for three years for chronic diarrhoea. The least excitement would cause her bowels to move. She had on an average six or eight evacuations a day. If a stranger came into the room, she had to go to stool. She could not go into society for this reason. For three years she had

taken no nourishment save stale bread, milk, and weak tea. She had the *protean* symptoms of general nerve prostration, viz.: Backache, wakefulness, nervousness, etc., together with a burning sensation at defecation, and an aching pain for hours afterwards. I gave this girl a careful examination, and found a sensitive spot in her rectum. Under chloroform I diminished the sphincter muscle, and touched the spot with nitric acid. She made a rapid recovery. In a few days all looseness of the bowels had disappeared, and she ate hearty three times a day."

2. Dr. J. G. Carpenter, of Stanford, thus relates a case in his own person: "I was the victim once of this spasmodic contraction of the sphincter ani muscle. Often when riding horseback, and feeling perfectly well, I would be seized with a sudden pain in the rectum, the sensation passing all over me as if I were struck with lightning, causing me to drop the reins in agony; of seemingly impending death. A few weeks would elapse before another attack. On every sudden change of the weather I was affected. Dilatation of the sphincter cured me."

Case 3.—Wm. B——, aged forty-eight, came to me with the following symptoms: At the approach of defecation he feels a severe pain up in the rectum, said by him to indicate the passage of the fecal mass over a sore place. During the act a lancinating pain is experienced, and after the evacuation a dull, throbbing, aching sensation which lasts for hours. A nervous exhaustion supervenes which completely unfits the patient for any mental or physical labor. The condition had lasted about two years. The symptoms seemed so clearly to call for division of the sphincter, that without a minute examination it was done under chloroform, and the promise given that he would be relieved. Several weeks after he reported at my office, saying that he experienced no relief whatever, and expressed the desire to die. I then carefully examined him and

could find no lesion whatever. Recognizing the powerful effect of the reflexes in these cases, I advised that he go to a genito-urinary surgeon and be examined for stricture. This he did, and was told that he had both a meatic and deep urethral stricture. These were divided by the surgeon, and the man relieved of his rectal symptoms.

Case 4.—Dr. H——, of Indiana, asked me at one of the medical societies to examine him, and gave the following history: Several years ago while prosecuting his professional duties, he was attacked by a terrific pain in the rectum. It was as if a sharp knife had been thrust through him. It would come up as paroxysms, with a few minutes only of intermission. He hastened to procure chloroform and inhaled it at each approach of the paroxysm, until it gradually subsided and disappeared. He now carries a bottle of chloroform, and regarded it as his best friend. Indeed, he said, nothing could induce me to part with it. He would likely go for weeks without an attack. Placing him in bed, I examined his rectum carefully with the index finger; had no instrument with me. I gave it as my opinion that a lesion existed, perhaps only the exposure of a sensitive nerve, and that a free divulsion of the muscle would effect a cure. He afterward consulted Dr. Cook, of Indianapolis, who gave him a careful examination with the speculum, etc., and agreed to the diagnosis I had made. An operation was not done, but we met him months afterward, and he reported that he had never had another attack, but still carried the chloroform.

Case 5.—A professional gentleman sitting in his office, with his feet elevated, felt a quick, sharp pain, dart through the rectum, near the verge of the *anno*. These pains came quick and sharp; he jumped to his feet and cried for help. A friend coming in caught him as he was in the act of fainting. The attack lasted about twenty minutes, and was quieted by opium. I directed that he

be taken home, and suppositories of opium and belladonna be administered for their full effect. The patient had three other attacks in so many days, after which all intimation of rectal disease subsided after treatment, which consisted of free washings of the rectum with hot water, and the use of the suppositories. And so I might go on to recite cases of this kind, but will make these suffice to illustrate my subject.

Cases 1, 2, 4 and 5 were evidently traumatic lesions causing the exposure of a nerve, and case 3 was due to a traumatic stricture of the urethra, and the pain in the rectum was entirely reflex. Four of the cases were entirely relieved by divulsion of the sphincter, and the fifth case did not succumb to the same treatment for the reason that the disease was outside the rectum. Hence the statement "If these diseases are relieved by local measures it proves the affection to be local, not *hysterical*, in the sense used by Dr. Goodell, *primary* and not *secondary* in their nature."

Secondly, if they be hysterical, or secondary, local treatment would not relieve, but a constitutional course would be necessary. Says Dr. Goodell, "sometimes the site of the rectal pain lies higher up than the sphincter muscle, and is irrespective of the act of defecation. It then is liable to show periodically in its character, coming on at regular hours of the day, probably from the periodicity with which the accumulation of feces in the lower bowel takes place."

In these cases, at least, all idea of hysteria attacking the muscle must be dissipated, for the reason that the disease is above the muscle. This brings us to consider more minutely the pathological conditions found in "*obscure diseases of the rectum*."

Believing hysteria to be a disease of the nervous system as defined by Webber, having no recognized *pathological* condition, we have argued that it is impossible for a muscle to be *attacked* by such disease; that when evidences such as have been described are manifested they are the result of disease *at*

the seat of trouble, or by reflex from continuity of stricture, and that such evidences are usually the result of trauma. Without such recognition the plan of treatment would be misleading and no good results obtained.

To revert. Disease is often found above the sphincter muscle, which presents symptoms strongly resembling the so-called "hysterical" rectum. From what do these symptoms originate? Are they, too, "some localized disorder of hysteria?" or are they from some pathological condition? I maintain that disease exists at this local point, and as a result we have pathological change or, per consequence of a disease in a contagious part, we have diseases made manifest by the reflexes. If either one of these propositions be true, then the idea of such diseases being hysterical in their nature cannot be sustained.

Now I do not believe that such condition is an hysterical one. A better term would be neuralgic, though this would be far from correct. There are so many pathological conditions which exist in the rectum, either of which could present all the symptoms of the so-called hysterical rectum, that the necessity for an examination cannot be too strongly urged. For instance, the rectum because of its peculiar office; of its deficiency of valves in its venous supply of blood; of its dependent position, etc., is quite liable to a congested condition, and to an inflammatory state. Because of these two conditions, ulceration is often found in this portion of the gut. Foreign bodies frequently lodge in the pouch of the rectum, and by mechanical means produce trauma. The passage of hard fecal matter frequently results in a tear of the mucous membrane, and the making of a small anal fissure. Even the use of hard substances as a detergent will do the same.

The enema tube is known to be a cause of a wound at the verge of the anus. Small openings of internal fistulæ are a source of great irritation. As other pathological conditions which may be responsible

for all the symptoms of an hysterical rectum, could be cited: 1 hæmorrhoids; 2 proctitis; 3 injuries to, or diseases of the uterus; 4 stricture of urethra; 5 cystitis; 6 enlarged prostate, etc. Indeed, any pathological state existing in or around the rectum. Until said state is restored to normal none of the so-called hysterical symptoms will disappear. Constitutional treatment would be of no avail. Besides the common diseases of the rectum, a few of which have been given here as causes of these vague symptoms, there are others of an obscure nature which are hard to detect. It is to these that I wish to call attention particularly. I can do no better than again refer to Prof. Goodell's paper:

"There is yet another form of disease which I think may be classified under the general heading of nervous rectum, although its pathology is by no means yet fully determined. I refer to pellicular colitis, or pseudo-membranous enteritis, as it is usually termed, in which mucous casts of the lower bowel are discharged with much tenesmus and abdominal pain, either by themselves or in the regular evacuations."

Such cases as these are frequently met with in my practice, and I cannot agree that the disease is a "sheer neurosis." I have seen the affection in patients not given at all to hypochondriosis, and relief has been obtained by remedies outside of those that affect the nervous system. I believe that in all these cases a disease exists, the result of pathological changes, as the name *colitis*, or *enteritis* implies, of *inflammatory* action. I have never yet succeeded in curing such a case outside of direct or local medication.

ETIOLOGY.

The rational treatment of all disease necessarily depends upon a correct diagnosis. How difficult this sometimes is, all practitioners of medicine are cognizant. Disease in the abstract implies a morbid change; a pathological vs. a natural condition. I have headed this article "The Nervous Rectum,"

a term which in itself implies a doubt. This year it has been the object of the paper to demonstrate by clinical facts a basis of argument to sustain the position taken, viz.: That these affections have their local origin in the rectum, and that all nervous manifestations are simply secondary to the same. If this premise be admitted, then the line of treatment is plain. Relieve the cause (local) and the manifestations (general) will disappear. If the premise is wrong and these troubles are "neurotic," *a. e.*, caused by a "disordered condition of the nervous system," then the term as used by Dr. Goodell, "nervous or hysterical" rectum is a correct one, and the line of treatment would be to correct this *general* condition, and the *local* symptoms would disappear. I do admit that the effect of a "sheer neurosis" is sometimes remarkable and difficult to explain, but I am satisfied, after an observation extending over a score of years, that these peculiar cases are not due to such conditions. For convenience of elucidation I will give the following as the causes of these obscure affections of the rectum, which have such symptoms as have been narrated in this paper:

1. Hysteria (?) (neurosis).
2. The reflexes.
3. A lesion, or pathological change at seat of trouble.

Of all vague terms used by physicians this one hysteria is the vaguest. Having reference as the derivation of the word implies, to the *womb*, the profession has been in the habit of characterizing many affections of the female, which they could not understand as hysterical. But so many symptoms analogous to these presented in the male, that we frequently see articles descriptive of them, and the same term used, I do not deny but that the nervous system is responsible for many strange freaks, but I do assert that much that is attributed to it, has origin in a local way, where a pathological condition exists. In such a case all the treatment that could be given for the nervous

symptoms would avail nothing until the local disorder was relieved. On the other hand it must be admitted that if the local condition was the cause, it should receive the first attention. Hence, I am inclined to the opinion that in this condition of so-called "nervous rectum" a careful and minute examination of the parts should be given. This I am sure is very seldom done. If this be done I assert that it would be the rarest of happenings to find a "nervous rectum" per-se. Therefore I will be excused from considering hysteria as a cause for rectal trouble.

2. *The reflexes.*—No one doubts the part played by the nerves in reflex action, as a cause of disease, and often of a mistaken diagnosis. It has been but a few years since Dr. L. A. Sayre startled the profession by his theory of adhered prepuce causing the spasms of infancy, vomiting as the result of a gravid uterus, epilepsy from strabismus, or a spasm from dentition, are every day examples of the force of the reflexes.

At the meeting of the International Medical Congress at Washington, I had the honor of reading a paper entitled, "*The Anatomy of the Rectum in Relation to the Reflexes.*" I cited cases to demonstrate that many diseases (?) of the bladder, uterus, ovaries, prostate, urethra, the cord, etc., were but manifestations of disease in the rectum, through the reflexes, and *vice-versa* it could be shown that many of the so-called rectal troubles could be traced to the same system of nerves. Therefore I concluded that many of these *obscure* affections of the rectum have their origin in the contiguous parts. In many instances I have known a stricture of the urethra, an enlarged prostate, an irritable bladder, a congested ovary, and inflammation in the sigmoid flexure, to cause a most uncomfortable feeling, and sometimes intense pain in the rectum. Therefore it is absolutely necessary in all of these obscure troubles to investigate these parts. It is a well recognized fact that all such troubles give rise to great nervous disturbances, but

it would be folly to treat them without first curing the pathological condition.

3. *A lesion, or pathological condition in the rectum.*—This is, in my opinion, by all odds the most frequent cause of the obscure rectal troubles. Indeed I am so fully persuaded of it, that I will not prescribe for any patient who presents such symptoms as have been described without first subjecting the rectum and sigmoid flexure to a rigid examination. Since adopting this plan I can say that it is the rarest exception that I fail to find the cause.

EXAMINATION.

What I mean by an examination, is not a casual survey of the parts or a half-way manipulation with instruments, but a careful and rigid inspection of the whole rectum. To describe, I first direct that the patient take an aperient, after which the rectum is to be thoroughly washed out with a large enema of hot water. The patient is then put upon a hard table, and with proper sunlight, or, as some prefer, artificial light, and a careful examination first of the anus. Sometimes a specula of bone, or other foreign substance may be detected in the verge, which, if removed, may stop all the trouble. An inspection is then made of the rectum proper. To do this thoroughly it is best to give an anæsthetic. A set of long gutta percha speculums should be convenient, and the size necessary selected. A wabs rectal bougie should be fitted to or in the speculum, and being well anointed it should be gradually pushed in. When the edge of speculum has passed well through the sphincter, the bougie should be withdrawn. Then by the aid of a good light the mucous membrane of the gut can be seen for six or seven inches. A careful search should now be begun for the trouble. Generally the eye is able to detect it, but I am in the habit of passing a long probe up the gut, and by feeling around as the instrument descends, it will frequently touch the

sensitive spot, and the patient notifies you of the fact.

Other pathological conditions, such as inflammations, ulcerations, etc., can be detected by ocular inspection.

TREATMENT.

Under the head of treatment I am to take

it for granted that a pathological condition is found in the rectum. I shall only refer to those that would likely cause symptoms simulating the nervous rectum. (?) They are, viz. :

1. Fissures.
2. Ulcers.
3. Congestions.
4. Proctitis.
5. Internal fistulæ.

I shall not consider the treatment of the graver forms of rectal disease, such as result from syphilis, or malignancy, although in their incipency they are often attended with symptoms very like the more simple affections herein named.

Fissures of the anus may escape notice even after diligent scrutiny. Therefore I have urged a very careful search for any abrasion. If any lesion or pathological change is found which is embraced by the sphincter, the remedy par excellence is *divulsion of the muscle*. It may be argued that this would only temporarily relieve; that the pain would reappear after the fibres of the sphincter had regained themselves. In my experience this is not true. The rest given the muscle is quite sufficient to allow the healing of the fissure, etc. The manner of divulsion is an item. I neither break, or tear, or use that violent force recommended by some. In lieu of all this I practice a rapid divulsion by means of a Cook's speculum, simply opening it to its fullest extent.

In classification 2, I use the expression *ulcers* in preference to *ulceration*; the latter indicating a more extensive condition than is found in these simple cases. I refer more especially to small ulcers that are often found along the course of the gut, and which

require a very simple procedure for their cure. A probe with cotton on end, dipped in *pure* carbolic acid, applied through speculum to the ulcer or ulcers, is generally sufficient to establish healthy action and insure a cure.

3. *Congestions*.—The rectum is very liable to a congested state because of its portal circulation. When congested, of course many of the symptoms of reflex, etc., are presented. A careful looking after the liver is essential, so it is my custom to first unload it with a chologogue cathartic, after which a free administration of some aperient mineral water is recommended. The rectum should be washed daily by injection of very *hot* water. This course is generally sufficient. If any of the astringents are needed they may be added to the wash, but I much prefer the use of boric acid—a teaspoonful to a pint of hot water.

4. *Proctitis*.—That the rectum can be inflamed seems to have escaped the minds of many. Because of its peculiar office, its abundant blood supply, its want of valves in a portion of its nervous supply, the exact position of the body, etc., it is very liable to become inflamed. When such condition exists, usually the only symptoms manifest are those of reflex. It is no wonder that the patient is doctored for all manner of diseases which he has not. Pains in the back, legs, belly, ovaries, general lassitude, nausea, nerve prostration, headaches, bladder involvement, loss of appetite, melancholia, etc., etc., are prominent symptoms of the trouble. It is no wonder, too, that this trouble is frequently called *hysteria*. When these vague symptoms exist I beg that the rectum be inspected. I know of no class of troubles that so effect the mind, even to a contemplation of suicide. If upon examination of the rectum I find it inflamed, the following course is pursued: Free aperients, hot water injections, a non-stimulating diet, perfect rest of the body, and the use of one of the following prescriptions as injections, to be used once daily :

- R Sub. nit. Bismuth ʒi.
- Iodoform grs. x.
- Sweet almond oil ʒi.
- M. S. Inject.
- R Fluid hydrastis ʒi.
- Water ʒi.
- M. S. Inject.
- R Listerine
- Water aa ʒi.

In obstinate cases it is best to put the patient upon a fluid diet. The best article that I have ever used is *bovine*, known as Bushe's fluid food. In conclusion permit me to say that I regard these *obscure troubles of the rectum* as worthy of your careful consideration. Many lives have been wrecked from the fact that patients so afflicted are neglected by the physician, and they fall into the hands of charlatans and quacks. Too much stress has been given in these cases to the nervous symptoms that present, and not to the local cause of the trouble. I cannot agree with Dr. Goodell when he says: "The treatment of a nervous rectum depends largely upon the general condition of the patient. If she have nerve prostration, as she usually will, failure will attend every effort to cure the rectal disorder unless the former is successfully treated. The very best general treatment for this condition of the nervous system is that devised by Weir Mitchell, which I have described in detail in the last edition of my 'Lessons in Gynæcology.' It consists of prolonged rest in bed, of seclusion from friends, of nutrition, of massage and of electricity."

I believe such a course pursued with such cases would be highly detrimental, and I cannot be too emphatic in saying, attend to the local cause, and the nervous symptoms will take care of themselves.

Provided, always, the general nutrition of the patient is not defective. Active outdoor exercise short of fatigue; wholesome food in reasonable amount and at seasonable hours; and above all things else regular sleep, may serve to protect against all general neuroses.

ARE IMMEDIATE AMPUTATIONS JUSTIFIABLE?

BY
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M. D.,
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Read to the Mississippi
Valley Medical Association,
at St. Louis, Sept.
27, 1888.

Immediate amputations are done during shock, and generally within two to twelve hours after the reception of an injury. Dr. Wyeth, of New York, restricts them to a much narrower limit. He lays down the maxim "that the propriety of performing

an immediate amputation after an injury is exceedingly questionable." He also says "the danger of death after an amputation depends chiefly upon the character of the injury and the location of the line of section. The prognosis becomes grave in proportion to the exhaustion of the patient, as a result of hemorrhage, shock, sepsis, or any dyscrasia on intercurrent disease."

In the humble judgment of the writer, Dr. Wyeth's maxims not to amputate immediately after the reception of an injury are too sweeping and dogmatic.

When an injury of an extremity is so great and the destruction so complete that an amputation is clearly and distinctly indicated, and when there is no show whatever of saving the injured member, it seems but right to amputate without delay.

Why should we delay or defer an operation that has to be absolutely done? Is the condition known as shock alone to deter or stand in our way of performing an operation which is clearly and undoubtedly indicated? An operation that is inevitable!

It is held by many most excellent surgical writers that amputations during shock are better, safer and more satisfactory than when reaction has partially or wholly set in, and of whom we may mention Drs. Ashurst (see Ashurst's Surgery), of Philadelphia; Murdock, of Pittsburgh; Gregory, of St. Louis, and Drs. Bardeleben and Albert, of Germany. (The reader is referred to Ashurst's table on amputations). It must

be remembered that a second shock produced by an operation after reaction which may be avoided, if the amputation is done during shock.

Experience has taught us that shock is a very grave and serious condition, and one that all surgeons dread but must meet.

Now, why should we wait until reaction, and then operate and thereby produce a second shock? Certainly a repetition of shocks must prove detrimental and compromising to any patient. That a multiplication of shocks is more harmful to the patient than the primary shock, is a mathematical demonstration that the merest tyro can understand and appreciate.

The writer therefore holds that it is justifiable, yes, far better to amputate during shock in all cases where an amputation is clearly and unmistakably indicated. Why then fritter away valuable time? In other words when an amputation is a necessity and unavoidable, it is right and a solemn duty to perform it at once. The following are some of the grounds on which the position is based, namely: Statistics prove that immediate or primary amputations showed a lower per cent. of mortality than any other. The patient is spared further pain, time, uncertainty of result and what is most important, loss of blood by removing a mutilated and useless member.

By the use of Esmarch's bandage we can make the operation almost a bloodless one.

Further, when the blood vessels are securely tied (which is only possible after amputation) and the flaps are accurately apposed all oozing of blood will stop and the patient spared what he so absolutely needs for the preservation of his life and vitality. After the stump is securely dressed and bandaged according to the most approved antiseptic procedure the patient will be comparatively safe and not until then.

The patient's strength will be further preserved if the operation is done during shock as it will require only a small amount of

ether or chloroform, if any at all is needed. Sometimes an hypodermic of morphine is all that is required. The injured often manifest but little pain during shock.

Operations are more favorable while the injury is recent and before inflammatory and other distressing processes have been inaugurated.* Immediate amputations are more favorable before certain changes of the nervous system have been brought about that are so certain to follow severe injuries.

It is better to amputate at once in cases where the patients have to be transported to the nearest hospital, as in railway and other disasters. Those injured who inevitably have to submit to an amputation, can only be safely transported after an operation. What surgeon would like to transport such cases, before an amputation is performed, and all dressings properly and permanently applied? The railway surgeon is generally so placed, that he is compelled to transport his cases at great distances, and at once. All surgeons will agree, that the first treatment, if rightly done, is the best and most satisfactory to all concerned. There is also a moral question involved in these cases, and it is this, such patients dread operations tenfold more after reaction, than when still laboring under shock. The patient's consent can be very readily obtained for an operation during shock. They rarely take much notice of what is going on, during that condition, that is, they are indifferent—a condition somewhat similar to anesthesia. It is not meant that undue advantage should be taken of the patient in that condition, but it is argued that what has to be done, should be done at once, and to his advantage. The patient is much more fretful after reaction, and is more unruly, and no one likes to operate under these disadvantages. Then what is clearly indicated should be done at once, and without hesitation. Many patients doubtless have lost their lives by procrastination on the part of the surgeon, while it is true, that some have lost their

lives by the inconsiderate rashness of the surgeon.

If these propositions are tenable and well founded the surgeon should not wait merely for reaction, and by temporizing place the patient's life in jeopardy. Of course a great deal depends upon the circumstances and surroundings of the case. Time, place, existing conditions and necessary and proper assistance should guide the surgeon in arriving at a decision to do or not to do an amputation. A great deal depends on the judgment and skill of the surgeon. He must be more than a mere knife surgeon

In cases where there are severe and grave internal or other injuries the question of an immediate amputation becomes much more doubtful, but the benefit should always be given in favor of the patient. Whatever we may decide to do should be done promptly and at once so that the surgeon can afterwards devote all his efforts to the after treatment.

The patient will have a better chance for his life when he is in the hands of a prompt surgeon than when an aimless method is adopted.

The result in a given case is frequently laid at the door of the amputation, when the severity and seat of the injury, hemorrhage and sepsis, are the cause of death. The previous health and constitutional vigor of the patient play an important factor in the result of the case.

Let it be distinctly understood that no amputation should be thought of where there is the least chance of saving the injured member. And where there is hope of restoring it to its minimum usefulness as a comparatively useful leg or arm is much better than none. It would be wrong to amputate where there are other fatal injuries. The surgeon would bring a discredit on his own fair name and an opprobrium on his profession. No amputation should be thought of where the indications are against

it. Many injured arms and legs that were formerly doomed to the knife can now be saved by the improved antiseptic methods of surgery.

Amputations are becoming more rare from year to year, but the time will never come when amputations can be numbered with the things that were.

Permit me to repeat that when a limb is completely and totally destroyed it must be removed and the sooner it is done the better for the surgeon, the patient, and his profession. Therefore the writer has arrived at the conclusion that immediate amputations are justifiable and proper in well selected cases. While it is right that the surgeon should be conservative in his practice, his conservatism should not lead him astray in the solution of the question of immediate amputations.

THE
MISSISSIPPI
VALLEY
MEDICAL
ASSOCIATION.

It has been intimated that a lack of the spirit of fraternity pervades the profession of this Valley. It has even been hinted that an average degree of intellectual activity exists in rare instances only in consequence of the blighting influences of the malarial conditions ever present in this region. Let us see how much truth there is in this. Note the freshest and best contributions to medical literature now appearing in all the leading medical journals of the country. In this issue of PROGRESS, as in a previous number, and in several issues yet to appear; the Journal of the American Medical Association; the Saint Louis Medical Review; the Courier of Medicine and Surgery; the Indiana Medical Journal; the Philadelphia Medical Register; the Times; the Cincinnati Lancet and Clinic; all exhibit evidences of the work done at the last meeting of the Mississippi Valley Medical Association.

EYE EAR, AND THROAT.

GRADATION

OF LENSES.

BY

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Read in the Section on Ophthalmology at the Thirty-ninth Annual Meeting of the American Medical Association, at Cincinnati, May 8, 1888.

Journal A. M. Association.

The lenses employed for testing refraction, as they are obtained from the best makers, are graded by three separate systems, namely: by focal lengths in inches, by focal lengths in metres and centimetres, and by the radius of curvature, on the basis of a unit representing the maximum angle of refraction, which, according to the old

astronomers, is equal to the quadrant of a sphere, or 90° of its circumference.

A series of lenses constructed of crown glass, having an index of refraction of about 1.53, each lens representing a definite fractional part of the unit, may be said to represent the only scientific series of lenses, because these are graded into such fractions as to represent a definite angle of radius; as, for instance, the most powerful convex lens in the series in ordinary use is one-half, and represents, not, as some suppose, 2 inches of focal length but, in fact, 45° of radius of curvature, or half the unit of astronomical refraction.

Now, some recognition must be given to the size of the disc represented by the circumference of the unit, or the lens whose refracting angle represents 90° , may be wholly unsuited to the purposes intended. To arrive at uniform results, it is manifestly clear the instruments employed should be identical, and all the conditions governing the process precisely uniform. To establish a standard series of lenses, Vitaleo and Bap-
tista Porta constructed spheres of crown glass and, by experimental tests, were able to determine that the maximum angle of refraction of light falling upon the surface of such a sphere equalled one-fourth of its cir-

cumference, or 90° of its radius. A separate lens, so as to represent the same amount of curvature, it was found would focus light at a distance nearly equal to one-half the diameter of the sphere from which this segment was taken; that is to say, light passing through such a segment, united at a point distant from the nodal point of the segment itself equal to one-half the diameter of the sphere of the same radius.

Now, if a sphere 2 inches in diameter, and another sphere 3 inches in diameter, be taken for experiment, it will be found that the focal length of the quadrant of the first sphere will be about 1 inch, whilst that of the second will be about $1\frac{1}{2}$ inches; so that any attempt at grading lenses by focal lengths must necessarily be utterly unavailing for scientific purposes.

Few who have not made the experimental test would be inclined to recognize the difficulties attending the measuring of the actual focal lengths of lenses. Take a dark box, into one end of which the skylight, through an open window, is allowed to pass, the intercepting lens will, if the box be small, collect and refract only the central portion of the pencil of rays entering it, and the result will be, if the light be bright, a stronger penetration and greater focal length will be registered than might be obtained by making the test with a series of points, of artificial light taken from a white or frosted background. If a large box be used—always presuming, of course, that the lining of the box shall be perfectly black, with a dead finish, so as to prevent reflection—so much light will have been absorbed before the focal point has been reached that it will be exceedingly difficult to define the focus, and, therefore, errors of 2 or 3 inches in measuring are commonly committed. If there be any asymmetry in the grinding of the lens, this will not appear in such a test. If two dotted lines, intersecting each other at right angles in the form of a cross, be employed, more definite results can be obtained, because, if any one of the dots in either of the two

crossed lines should appear of irregular form on the polished side of the frosted glass register, it would at once show asymmetry in that part of the lens; and if, by revolving the lens, it should turn out that points in corresponding portions of the several lines were distorted, the asymmetry of the lens would thus be established beyond doubt, and might even be designated by a mark on the surface to show the precise part defectively ground.

If any coloring matter be present in the glass, it will cause halos in certain portions of the field represented by the dotted lines on the frosted glass register. To make this test, of course it is necessary to have an instrument constructed with an opaque metallic disc, perforated by circular openings across the centre, and on the face of the disc another line formed in a similar manner, at right angles to the first, so that they shall cross exactly in the centre of the disc. Against the surface of this perforated metallic disc a piece of frosted glass should be placed. A lamp flame or a gas jet will furnish the best source of illumination. Having a positive lens between the source of light and the perforated disc, uniformity of illumination may be secured. The lens to be tested should then be placed in a clasp on a beam, supplied with an arrangement for sliding both the disc containing the perforated plate and another frosted glass disc at the opposite end of the beam, upon the surface of which the points of light refracted by the lens being tested, at the centre, are collected. On the surface of the beam, from the centre to the distal end, the different points at which the light is focused on the registering or collecting disc may be marked in a scale, which shall be used for the determination of the refracting powers of spectacle lenses, or other lenses of similar character, which it is designed to measure. Snellen's phakometer fulfils these indications, and is, in its improved form, the most accurate and satisfactory instrument for determining the quality and the refracting

powers of lenses, whether spherical, cylindrical or compound, yet devised.

In his preface to the English translation of Scheffler's "Theory of Ocular Defects and of Spectacles," Prof. Brudenell Carter, of London, says: "It is well known that much dissatisfaction has been felt with the irregular intervals between the lenses in the test-cases commonly sold, and that great confusion has been produced by the varieties of the so-called inches in which focal lengths have been expressed." At the International Ophthalmological Congress at Paris in 1867, Zehender proposed to adopt a new system of gradation by which lenses should be known by numbers, the No. 1 to represent a focal length of 240 centimetres, the No. 2 to represent a focal length of 120 centimetres, the No. 48, which is the third of the series, to represent 5 centimetres of focal length. The equivalents of this series, it may be seen, according to the other systems of gradation now in use, would have to be found by an attempt at reducing the centimetre to some other kind of measure; but this is not all; the metre itself is, according to the commission which recommended and established it as a unit of measurement, approximately the ten-millionth part of the earth's quadrant; then the one-hundredth part of this unit must be an exceedingly indefinite quantity.

I spent the summer of 1878 in Paris. During my stay in that city I devoted considerable time to studying what is called "the metrical system" of weights and measures. I sought, at the dry goods stores, sticks representing the metre, such as are used in measuring cloth. I bought three tape-lines from three different manufactures, upon the surface of which were marked metres, centimetres and millimetres. I got three Verniers from different instrument-makers. By actual comparison, the marks on the three Verniers did not correspond. In taking a centimetre of space upon them, there was a total difference of from 1 to $1\frac{1}{2}$ millimetres. The tape-lines varied much

more than this, while the metre sticks differed more widely, both in total length and in the fractional marks upon their surface. Just think, then, what confusion must necessarily result from any attempt at determining the refracting powers of a lens by establishing its focal length, imperfect as are the means under the most favorable circumstances for testing.

Now, I am aware that difficulties beset all new ventures which partake of the nature of reform; yet I venture to suggest the propriety of casting aside all former methods of grading lenses, and of adopting an entirely new method which, to my mind, has the advantage of both simplicity and utility. I propose, instead of taking the quadrant of the sphere as a unit of refraction, as the astronomers did in the time of Roger Bacon, who was the real inventor of spectacle lenses, to begin with the lowest perceptible angle of refraction, and calculate by that means alone the refracting power of the whole series, from $5'$ to 90° . For example, I would designate the lens which in the metrical system is called one-fourth dioptré, and which according to the astronomical refraction represents about the $\frac{1}{160}$ part of the quadrant, or a radius of $33' 12''$, by the angle of refraction of $30'$. This, of course, would not be an exact equivalent, but a far more symmetrical proportion than any fractional part of the maximum angle. I would begin, in fact, with a lens of just one-half that power, and proceed something after this plan in the regular order of increase of the refracting power, namely: the weakest lens of the series might have a refracting angle of $15'$, the next $30'$, and the next 1° . Now, this lens of 1° angle of refraction would correspond almost exactly to $\frac{1}{80}$ part of the quadrant or to that in the metrical system marked 0.50 D. Its radius would be about $1^\circ 6' 24''$. Proceeding in this manner, the next lens in the series should represent $1^\circ 30'$ of refracting angle. This corresponds to 0.75 D., or $\frac{1}{60}$ of the maximum angle of the old system, and

represents $1^\circ 39' 36''$ of radius. 1 D. of the metrical system corresponds to $\frac{1}{40}$ of the old unit, which has an angle of radius equal to $2^\circ 15'$. Instead of this, we should have an angle of refraction represented by 2° simply. Proceeding further by the separation of lenses according to the refracting angle of $30'$ until an angle of 6° has been attained, the interval might then vary by 1° until 20° are attained; then 2° should separate the lenses of the series between 20° and 30° ; then 3° from thirty to fifty, and 5° from fifty to eighty. A series of lenses projected upon such a plan would afford the greatest facility for testing the state of refraction in the eye, and would correspond scientifically to Snellen's plan for determining the acuity of vision upon the basis of a visual angle of $5'$.

I present this matter for your serious consideration, in the hope that you will discuss it, if not publicly, at least amongst yourselves. I presented it in a brief manner to the Ophthalmological Section of the Ninth International Medical Congress. I have to-day considered the question from a slightly different standpoint. I shall attempt to give it more practical illustration at Newport next year if I have the good fortune to be able to meet with you.

POSTSCRIPT.

Since the publication of August 18, 1888, in the Journal of the American Medical Association, I have been requested by several manufacturing opticians to submit a precise list of the lenses for a model test case. After some deliberation I have concluded the subjoined will be found adequate to all ordinary requirements.

The spherical and cylindrical lenses should be in pairs both + and —. The prismatics to be graded by the angle of deviation of the refracted light, just as the spherical and cylindrical lenses are. The whole to be cut in discs of $1\frac{1}{2}$ inches in diameter. The case should have one opaque copper

TREATMENT OF
AURAL DISEASES.

BY

C. H. BEARD,

M. D.,

CHICAGO.

Read to the Mississippi
Valley Medical Association
at St. Louis, Sept. 26,
1888.

The surgical and therapeutic literature of otology is relatively limited, thus proving that the status of the science is low.

Sir William Wilde was about the first who made any decided addition thereto. He, in fact, stands

very much in the same relation to aural science that Leonarde da Vinci does to the art of painting. Dr. St. John Roosa has very aptly remarked, "I think it would be better for science if all otological literature up to the time of Wilde were rejected."

Unfortunately for my hearers, I have nothing to add—merely to read a few desultory notes having a sort of general reference to *energy* and *thoroughness* in the treatment of diseases of the middle ear, chiefly from a surgical standpoint.

True, otic literature is scant, and achievement in the art of aural surgery is small, yet there can hardly be any doubt but that the field here offered, for both discovery and invention, is vast. And just here is where, in my humble opinion, among the most important and startling revelations of modern medicines are destined soon to be made;—in surgery affecting the treatment of both non-suppurative and suppurative diseases of the tympanum and adjacent parts. We have often been afforded glimpses of the possible in this connection; as, for example, the very considerable improvement of hearing and relief of tinnitus following operations such as trephining and scarifying the m. t. tenotomizing of the tensor tympani and section of the posterior fold—belonging to the first head of my subject; and prompt recovery of old and troublesome otorrhoea as the result of accidental resection of the whole, or a portion of the chain of conducting bones, and the cure of a chronic purulent affection of the tympanum, complicated with mastoid

disease and intracranial abscess, after trephination of the skull over the region of the mastoid foramen* belonging to the second head. In this same connection I might mention also a feature in aural therapeutics noticed by other observers as well as by myself. It is this: there comes a patient with chronic suppuration of one or both middle ears, treatment is begun and the very first apparent effect is a tremendous acute inflammation, involving not only the tympanic cavity, but also the external auditory meatus and the eustachian tube. Then, within an astonishingly short time, entire relief from *both the recent and the old complaint*. May not this point to a likelihood of the successful employment of remedies in certain ear diseases similar in their action to jequirity used to advantage in phases of trachoma?

The first word of my text, *energy*, has special reference to the handling of the non-suppurative, chronic disease of the ear prominent among which are those characterized by atrophy or other degenerations of the m. t. ankylosis of the joints of the ossicula, and general sclerosis of the tympanic mucous membrane. The second word, *thoroughness*, relating chiefly to the treatment of the suppurative class. And the object for which I briefly beg your attention is not to present for consideration original methods, but to elicit the relation of experiences, and to help inaugurate an era of more exhaustive research, of fuller experiment and of greater attention among physicians in general, and among specialists in particular, to every possible detail as applicable to otic practice.

With regard to energetic measures, I would not be understood as implying anything decidedly strong or heroic, but rather as urging the substitution of a form of pertinacity where it is feared. There is often either a want of decision or total passivity. Nor do I advocate either surgical interference in *all* affections of the ear, or suggest merely

* Dalby, Brit. Med. Jour. '74.

local treatment for all cases of otorrhoea—since it goes without saying that we must ever be on the alert to detect and combat constitutional tendencies. Certainly we are seldom warranted in meddling surgically with ears where the hearing is fairly good;—indeed, where it is not greatly impaired. He is a wise man who knows when to let an ear alone; yet he is a wiser who knows when, and in what direction to persist in his endeavors to accomplish good for his patient. While it is a lamentable fact that much harm is done by over-treatment, are we not too prone to consider as “a bad lot,” for instance, most cases of so-called chronic dry catarrh of the middle ear? Dr. Behrens said in a paper recently read before the Chicago Medical Society—“There is something contagious in this pessimism, and otology stands to-day with bowed head in deep contemplation before the m. t.; at all events, so far as the catarrh of the middle ear is concerned.” Let us not give up so easily, at least, while we are led to infer that the essential factor in the sense of hearing, the labyrinth is reasonably intact. Have all former attempts to relieve such deafness through surgical or medical interference been so fruitless? May we not hope for much good from operations such as trephining of the m. t. or treatment like hypodermic injections of pilocarpine in our dealings with this unfortunate condition? If making a hole through the drum-head has been found to cause but temporary improvement on account of the eventual closure of it, let us be more resolute in our efforts to hit upon a means of making the opening permanent. I once heard one of the world’s greatest aurists say, that for this purpose the galvano-cautery was infallible; whether or not he has reason to recant I do not know. For an absolutely aseptic instrument, however, commend us to this.

There is room for grave question as to the propriety of our American custom of associating the sciences of otology and ophthalmology. The former often seems to be-

come a sort of makeshift, while we forge ahead most determinedly in the latter. Witness, for example, the vigor which experiment, in the matter of transplanting the cornea of animals into human eyes has of late been carried on. True, but little has been accomplished, but that little may in two or three instances have caused the difference between total blindness and very poor vision. The cases, upon reflection, are not so dissimilar—i. e., an ear with a sound labyrinth but with a lifeless, opaque drum membrane, and an eye with most of the media clear, and sound retina, but with total leucoma of the cornea. Indeed, as Dr. Robert Tilley in his excellent paper, read before the ninth International Medical Congress has demonstrated the m. t. and the cornea resemble each other in many respects. And it is not alone the tympanic membrane that challenges our surgical aptitude, but the ossicles, exostoses and calcareous deposits in the tympanum, and the little muscles, the eustachian tubes, anchyloses, even of the stapedio-vestibular joint itself, and, perhaps, the labyrinth, present seeming possibilities in the way of achievement along this line.

Among the very first requisites however, to any greater success are better, surer means of diagnosis as to the exact hindering causes to the proper conduction of sound in these cases. As it is, we can rarely be confident concerning the precise part of the acoustic apparatus which is at fault. And just here, might not free trephining of the m. t. even if it did nothing more often lead to the discovery of the obstructions? Might it not in many cases with advantage replace sounding tests? As has been shown, there is comparatively little risk in the operation when carefully performed, especially where the membrane is atrophic, the tissue being so unresponsive. In a discussion before the last meeting of the Am. Otol. Society, Dr. Burnett of Phila. said: “No one has reported any bad results from this operation properly performed.” And Dr.

Sexton, of New York averred to have done it between fifty and one hundred times without an accident. The obstruction thus revealed, it might be advisable as well as practicable to remove. To be sure, such surgery is by no means new, nor has the outcome of it been ever encouraging, yet the mere fact of its having been discouraging should stimulate us to renewed and more determined effort. If results therefrom prove only of diagnostic value, a great deal shall have been accomplished.

While in Europe such men as Hartsmann, Jacobson, Steinbrügge, and Gellé are toiling in the physics of the ear, we, here in America are very dilatory in this regard or else very reticent about our work. In some of our aural institutions the use of the tuning fork as a diagnostic instrument is apparently unknown. Let us hope that appearances are here deceptive and that there are those among us, who, delving deep into these intricate things are preparing for the scientific world a happy surprise.

In the matter of *thoroughness*, the little that I have to say has a more direct bearing upon the treatment of chronic suppurative disease of the ear. The word, in this sense, might almost be restricted to its use with the word *cleansing*—thoroughness in cleansing.

If there is any consolation to be derived from aural practice, it is apt to come from our careful handling of old running ears. Time and duration does not seem to figure as to the prognosis in such cases. Patients thus recover after having been annoyed throughout as many as three score years. It is my humble opinion that there are but few cases of chronic suppuration of the middle ear that will not yield to persistent, thorough cleansing with warm aseptic water, used in great abundance, and followed by drying, *equally thorough*. It is, as we all know, one thing to go fully, to the letter, through all the motions of cleansing an ear, and quite another to satisfy ourselves that we have succeeded to the utmost in our

task. I speak, of course, of cases where there is more or less destruction of the drum membrane. We should see, not only that the external meatus and tympanum are clean—freed from pus, cheesy masses, scales and granulations, but also that the eustachian tube is freely permeable. It has been my unhappy experience to note a woe-ful lack in this regard on the part of many of the really great aurists, whose work I have been permitted to see. Especially is this true of their dispensary work. The most thorough of them all, so far as my observation goes, are the two great Vienna rivals—Messrs Gruber and Politzer. How often have I had cause to admire the rationality of their methods and the completeness of their systems, particularly in the treatment of mastoid cases, and what excellent use they make of the paukenrhröchen, or middle-ear tube of Weber-Liel, in this most grievous complication. Then their efforts to obtain through drainage where there is a mastoid opening are so prevering, and generally as successful. These, too, I mean mastoid cases—above all, those in which there are symptoms of intra-cranial disturbance, or of septicaemia, we are, I believe, too apt to give up for gone. They do sometimes recover.

In conclusion, I have only another deprecation. This relates to the relatively slight attention accorded the naso-pharynx by the—I was about to say average aurist, but I will not stop at that. I believe we are nearly all given over to the habit of neglecting parts, where, it is pretty safe to say, originates the very cause of a vast majority of the middle-ear diseases.

Not only are our outfits for the examination and treatment of the naso-pharynx meager in the extreme, but we are not, as a rule, by any means, artists in the use of what we have. What wonder, when acknowledged authorities come out in their text-books with the assertion that they rarely employ rhinoscopy as an aid to diagnosis in the treatment of ear diseases?

DISTINCT AND
INDISTINCT
VISION.

BY

JAMES JURIN,

LONDON.

An appendix to "a complete system of opticks,

BY ROBERT SMITH, L. L. D.,

Professor of Astronomy and Experimental Philosophy, at Cambridge, and Master of Mechanicks to his MAJESTY," Cambridge, 1738.

Continued from September Progress, Page 131.

For, let AB in Fig. 46, represent a part of the circular narrow line bounding the circle described with the radius EA : And let $ehgi$ be a *semicircle of dissipation*, having its center e in the outer edge of the narrow circular line AB , and cutting the radius Ee produced in the point g . Also let $ehfi$ be another *semicircle of dissipation* having its

Then will the circular segment $figh$ represent the quantity of shade thrown from the ring upon the inner point e .

And the circular segment $nqop$ will represent the quantity of shade thrown from the ring upon the outer point m .

And if thro' the point i be drawn the right line rs perpendicular to the radius Ei , and thro' the point g be drawn the right line vt perpendicular to the same radius: the space intercepted between these lines rs, vt may be considered as a rectangular object of the same breadth as the circular object, or ring $ABDC$.

But by the inspection of the figure the circular segment $figh$ is greater than what would be cut off from the rectangular object by the *circle of dissipation*, whose center is e , and whose radius is eh .

And the circular segment $nqop$ is less than what would be cut off from the rectangular object, by the *circle of dissipation*, whose center is m , and whose radius is mp .

Therefore the shade thrown upon the point e from the circular segment $figh$, is greater than what is thrown upon the point m from the circular segment $nqop$: that is, the inner point e will appear darker than the outer point m , or the *penumbra* will be stronger on the inside than on the outside.

92. Since the breadth of the *penumbra* on the inside is equal to the *radius of dissipation*, it is manifest that the more this radius increases, the more will the radius Ef , Fig. 46, of the white circle be diminished: And when the *radius of dissipation* becomes equal to the radius Ee , the white circle will entirely disappear, and in the room of it a black spot will appear in the center E , surrounded with a *penumbra* whose radius is double to Ee , the radius of the circular line. And this is found true in fact, when such a circular line is either much too near, or much too remote to be seen distinctly: For then the object A appears as B , E as C , and I as D , Fig. 48: but to make the experiment rightly, the radius of the circular line must be proportioned to the distance.

center e on the inner edge of the same circular line AB , and cutting the radius Ee in the points.

Then it is manifest, that the faint appearance, or *penumbra*, of the circular line AB must extend inwards of the point f , and outwards to the point g : Or, the whole breadth of the *penumbra* must be equal to the two *radii of dissipation* ef and eg added to the breadth of the circular line AB .

Consequently, the radius of the white circle, or Ee will in this appearance be diminished to Ef , the part fe being taken up by the *penumbra*.

91. I say further, this *penumbra* will be stronger on its inner edge than on the outside.

For in Fig. 47, let the narrow circular line be represented by the ring comprehended between the two circular lines AB and CD , which ring is here made very broad to render the parts we are going to speak of the more discernible: And from the center E draw the radius Eiq , cutting the inner and outer edge of this ring in the points i and q respectively. Then setting off in this radius the two equal distances ie and qm , each less than the *radius of dissipation*; from the centers e and m , with the *radius of dissipation* draw the arcs fhg, npo , cutting the circular lines CD, AB , in the points f and g, n and o , respectively.

93. Hence we have a good method of finding by experiment the *radius of dissipation* at any distance without the limits of *Perfect Vision*.

Upon white paper draw the circumference of a circle with a strong black line, and place the paper by guess about the farthest distance at which your eye can see an object distinctly. Then retiring gradually farther from the paper, observe at what distance the white circle in *B*, Fig. 48, appears equal in breadth to the *penumbra* on either side of it. At that distance the *radius of dissipation* is nearly equal to half the radius of the *true image* of the circle.

Again, retire still farther from the paper, till the white circle vanishes and the central black spot just begins to appear. Then the *radius of dissipation* must be precisely equal to the radius of the *true image* of the circle at any distance is easily found by Art. 380, of this Book of Opticks, and consequently the magnitude of the *radius of dissipation* at the same distance may be determined.

94. When the *radius of dissipation* exceeds the radius of the *true image*, there will appear in the middle a circular spot equally strong in all parts, surrounded with a *penumbra* fainter than the spot will be a *faint false image* of the circular line, like the *faint false image* of the circular object in Art 23. And the breadth of this circular spot, or *faint false image*, will be equal to the difference between the *radius of dissipation* and the radius of the *true image*.

This is easily shown after the same manner as we proved the 23rd Article by Fig. 11, where the circumference *ABD* represents the *true image* of the circular line, whose radius is r ; *cbfgh* the *circle of dissipation*, whose radius is e ; the circle *Ca bd* represents the central spot, whose radius is $e-r$; the circle *CHGF* represents the whole appearance whose radius is $r+e$, and the ring *abd FHG* represents the *penumbra* round the central spot, whose breadth is $2r$.

(TO BE CONTINUED.)

ADJUSTING GLASSES.

An examination of the optical properties of eyes that are tired, ache, or that have become dim, involves not only a knowledge of the minute structure and functions of each part, but a knowledge of pathology and therapeutics as well. It is necessary likewise that the examiner should understand the laws of both refraction and accommodation. He must also be familiar with those principles of science involved in the establishment of the fixed standard of acuity of vision based upon the angle of refraction. With this knowledge thoroughly mastered, such instruments of precision as may enable the observer to determine the conditions necessary for the establishment of perfectly normal refraction, in an eye otherwise sound, or to discover those constitutional disturbances of nutrition, accompanied by œdema, hyperemia, or inflammation, are necessary, but no one will pretend to say that even a thoroughly complete theoretical knowledge of medicine as it is taught in the best colleges qualifies one for the work of determining the presence of errors of refraction in the eye, and when it is proper to correct them. Theoretical, instrumental, and clinical instruction in ophthalmology must be added to the knowledge of the experienced and fully qualified general practitioner, to make the work of the ophthalmologist reasonably complete. Just think then how poorly an itinerant spectacle vendor must be equipped for examining the eyes and adjusting glasses. Glasses adjusted without reference to intra-ocular diseases often provoke choroido-retinitis, cyclitis, glaucoma, sub-retinal effusion, and detachment of the retina. Glasses adjusted without first suspending the accommodation commonly produce permanent scotomata, myopia, amblyopia, etc. Shall this branch of practice be conducted by common jewelers, and by peddlers?

If so, educational training should be regarded as an idle waste of time.

OBSTETRICS AND GYNÆCOLOGY.

GYNÆCOLOGIST
VS. GENERAL
PRACTITIONER.

BY

J. W. BROWN,
M. D.,

OF MOTTVILLE, N. Y.

Read in the Section on Dis-
eases of Women, at the
Thirty-ninth Annual
Meeting of the American
Medical Association, May,
1888.*Journal A. M. Association.*

The able paper of Dr. Van de Warker upon proper methods of *instruction* leaves little to be said; but how shall we *practice* who are numbered with the rank and file of the profession, and are not so happily situated that the elegancies of specialism

are obtainable? His attainments are well known, although but little from his pen appears in the journals, and he is not *invited* to elaborate pages of *theory* in the prevailing subscription treatise. His attendance at stated meetings of our various medical societies is uncertain; yet his opinions are none the less worthy of consideration. With only a limited command of current literature and less time for its perusal, and with a meagre library, we find him working out these problems after methods of his own that demand recognition, even when unaccompanied by the erudition and culture of our cities.

Results are of more value to our patients, even if lacking the trade-mark of Vienna or Berlin; but how shall we obtain them? We all know to our sorrow the *magic* of the word "gynæcologist" to *our patient that pays*. Imperceptible she drifts from us. But how about the poor unfortunates who cannot afford this luxury, and whom we have with us always? To the wealthy, or those of modest means, the "private" hospital is always open, with skilled attendants, proper diet, regulated exercise, freedom from care, plenty of sleep, and, after weeks or months of special treatment, they return to us greatly benefitted—sometimes (?) well, and at a cost that would wonderfully help the family physician; but *specialism is expensive*, and we therefore see the *cream* served upon the table of our brethren of gynecic renown,

while we take *skim-milk* "in ours," and patiently listen to "how little country doctors know about female troubles," and are asked to wait when our modest bills are presented, as it cost *so* much for Dr. —. In the meantime what becomes of our poor patient (her husband mayhap a laborer), with a large family? She anæmic, with all the concomitants of typical nervous exhaustion. Does she ever get well? Is her progress any the less rapid than that of her more fortunate sister?

We all know what specialism accomplishes, and it is far from my desire to disparage it. We would indeed be in "*outer darkness*" were it not for distinguished labors of American gynæcologists. But what means shall we adopt when we cannot follow in their footsteps, not having the adjuncts at our command? Who is there in active country practice that has not some of these typical cases who can barely afford the necessities of life. We have no hospitals at our disposal, and attendants are limited to some gossiping dame whose constant chatter drives them to the verge of distraction; the food is often improperly cooked and served in a manner that may be termed brutal; the little niceties of the fastidious nervous invalid condemned, as fussiness, and a spirit of fretfulness developed by constant "nagging." It is useless to extend the tale—we all know it only too well; yet are our results any the less satisfactory? Is there not a tendency among our *confrères* of gynæcological renown to ignore what general medicine taught them years ago, and attend only to the *special* features as seen by them, and by *their* influence through their patients affect the majority of women by calling attention to genital disturbances and thereby magnifying them? To us that cannot afford these luxuries and have not the time at our disposal for the dilettanteism of the profession, what shall we do? With the best means within our reach, *theoretically* our work is useless. *Is it so practically?*

What will best accomplish the cure of

these poor nervous invalids, with no brain lesion, yet standing upon the border of "melancholia" — starving mentally, nervously and physically? Why does insanity in country districts make such rapid progress? We who spend our lives in farming communities know too well the monotony that is the lot of our poorer patients and, when accompanied with genital disturbances, makes their lives a curse and causes us more anxiety than profit. Shall we desert them because theoretical treatment is not attainable, and financially they cannot be removed from these influences and obtain the rest of body and mind so essential to recovery? Take our specialist from his idols and where is he? We must solve this problem ourselves, and I hope the discussion may develop much that we can apply to their alleviation. In their management, the merely negative man will not succeed. Be certain of your diagnosis, "then go ahead." Obtain their confidence or else abandon the case. Respect the hyper-sensitiveness, that is always present. Do not be arbitrary, as much depends upon moral suasion. Treat all genital lesions after recognized methods, adapting to the circumstances and surroundings. We have plenty of fresh air and, with pure milk and good diet, general debility can be slowly restored. Use tonics judiciously, but the mental starvation, associated with ovarian tenderness, engorgement, neuralgia and its legion of disturbances, must ever prove the obstacle that requires our most urgent efforts to surmount.

Neurasthenia is no myth, even among the poor or in remote country places, and the difficulties of cure will ever tax our utmost resources. Regulate menstruation and the abuse of sexual gratification. Divert attention from genitals, making light of their influences. Educate the will. Teach self-reliance. Turn their thoughts towards recovery, not hypochondriasis. Make them understand that you will assist, *not* sympathize with every imaginary ache and pain. Trust them and encourage them in their

effort towards recovery; even "if they fall by the wayside," try it again. Do not encourage morbidness, for we all know the craving for sympathy that invariably persists even when partially convalescent. Avoid drugs, especially anodynes, hypnotics and opiates. Treat upon general principles, no matter if it is old-fashioned. It is no sign of mental decrepitude if our patient retains her ovaries intact or trachelorrhaphy has never been performed. Again repeating that, while admiring the skill and general worth of our brethren of special faith, they must always remember that general medicine is the *sine qua non* of success.

SECTION ON DISEASES OF CHILDREN.

A. M. A.

John A. Larrabee, M. D.,
President, 1823, Baxter
Avenue, Louisville, Ky.

Chas. G. Jennings, Secre-
tary, 544 Jefferson Ave-
nue, Detroit, Mich.

At the thirty-ninth session of the American Medical Association, held in Cincinnati, Ohio, the section on Diseases of Children attracted more than the usual amount of attention.

The meetings were largely attended, the papers presented were of interest to the general practitioner, and the discussions, often spirited, enabled the members to give personal experiences, *e. g.*: The discussion upon "infant feeding," which occupied the first day. To remind you of the importance of the section upon pediatrics would be supererogatory. To consolidate such a section of practice under the head of "midwifery" would be a step backward, entirely unwarranted, and it becomes all members interested in this great and uncultivated field of practice, to sustain at Newport, the high position attained at Cincinnati. I feel at liberty to call directly upon you for the title of your contribution to our section, in season. It is a matter of regret that discussions, more valuable than the paper discussed, have been omitted from the transactions. An effort will be made to secure for our section, one or more stenographic reporters, to supply our discussion to the press.

J. A. LARRABEE.

PATHOLOGY AND HYGIENE.

THE PSYCHICAL
TREATMENT
OF INSANITY.

BY

ROSE WRIGHT BRYAN,

M. D.,

*"Choverly", private hospi-
tal for the insane.*

GLENCOE, ILLINOIS.

Read to the Mississippi Val-
ley Medical Association at
St. Louis, Sept. 27, 1888.

"I once heard a pa-
tient say every Super-
intendent of an Insane
Asylum should be
shut up for six months
upon his own wards,
especially the violent
ones, before he is al-
lowed to enter his
professional duties, in
order that he may
realize what the in-

sane atmosphere means. This ward is
literally hell."

The lady was herself considered a dan-
gerous and irresponsible person, but I felt
that she was uttering a truth and the remark
recurred to me years after, under entirely
different circumstances with renewed force.

I had been for several months assistant
physician at the Massachusetts Prison for
Women, and interested in my work had
hardly left the building during that time,
until one day when I was urged to go to
Wellesly College for an evening reception.
Before I reached President Freeman's table,
whose guest I was, I became conscious of a
curious mental condition, an overwhelming
bewildering feeling, the exact counterpart
of that physical one we experience when
we step out of the dark into the light, and I
believed then as I do now that the unspoken
influence of those 400 earnest students had
blinded me, because during the past seven
months I had been living and breathing a
psychical atmosphere saturated with ignor-
ance and crime. Yet I had never been
consciously depressed by my surroundings
in proof of which I will take the liberty of
stating that not many days before this oc-
currence a woman whose repellent manner
had always prevented my addressing any
word of sympathy to her said to me as she
was going away. "Doctor I have often
wished you would talk to me and you
have not, but nevertheless I must tell you

that your cheerful presence has helped me.
It has made me feel that there might be
some hope in the world."

I quote these incidents because I believe
them to be of value as psychical facts and
that it is only by the study of facts that we
can arrive at the laws which govern them.
That self-evident facts are ignored in the
treatment of insanity I firmly believe and
hope to prove.

The psychical treatment of insanity
should I think include all these agencies
that affect the emotional as well as the intel-
lectual processes exclusive of medical sub-
stances. I shall divide these as they seem
to arrange themselves into mechanical and
personal.

By mechanical agencies I intend to indi-
cate the locks and bars and other means of
restraint which deprive a patient of his liber-
ty; that these are often in themselves psy-
chical agencies for good every one familiar
with institution treatment of the insane has
not failed to observe for the restraint they
impose is not only an *unrealized* benefit but
is very often *felt to be* a distinct relief by the
restless, perturbed, unhappy prisoner. The
conscious influence may be compared to
that executed by the trainer who teaches
his fleas to walk, by suspending a perfectly
transparent glass above them, until they
are impressed with the thought that they
have lost the ability to hop, or like that of
the mother who holds an excited struggling
angry child still, until the *inability* to ex-
press its emotions quiets it. The princi-
ple underlying this fact is a very important
one, namely, the central modification in-
duced by peripheral sensations and is capa-
ble of extended amplification whenever pa-
tients are treated individually.

The second effect of restraint—the men-
tal relief resulting from the inability to act
is often a very large element in the cure of
patients committed to asylums for treatment,
and acts irrespectively, although conjointly,
with that felt in the removal from surround-
ings which are associated with, if not the

cause of the mental disturbance. But in all cases which are capable of improvement there comes a time when this mechanical control and separation from the interests of life is detrimental and may subdue the desire for spontaneous activity so that the patient instead of progressing becomes converted into a more or less complicated automative.

It is just at this point that the wisdom and judgment of the alienist are tried to the utmost and that a timid, conservative man, may condemn his patient to life long incarceration because he dares not take the personal risk incident to the discharge of a patient not absolutely well, secure in his selfishness for demented wards, like graveyards, tell no tales.

I know to-day a patient thus doomed to a life-long residence in a state asylum by one superintendent who was discharged within three months by his successor with absolutely no change in her condition in the meantime and who nevertheless remained perfectly well for years, and another who was declared a hopeless case by two well known specialists, who is now on the road to recovery, under different conditions. Both of these women are convinced that a longer continuance of the routine asylum existence would have resulted in a relapse in the one case and imbecility in the second and in either the prognosis of the physician would have been correct.

To restate the position I have taken but for which I do not claim originality, for the same reason that the mechanical restraint of asylum life is so extremely beneficial in certain stages and certain cases of insanity, it should be abandoned in others, and the most scientific student and observers urge a wise and increasing use of the parole system with a better classification of patients. But I believe that we also need private hospitals which shall be half way stations between the asylum and the home where patients can be received without commitment and treated without restraint putting

them upon their honor and encouraging them to make a rational effort towards self help. Hospitals, where not only convalescents may be treated but also that large class of cases who are in the incipient stage of insanity and who are now cared for at home or put into asylums to their own detriment.

In this connection I am led also to refer to other reasons for the use of parole and intermediate hospital-provision, which do not seem to me to receive due weight, because it is so impossible for those who have not experienced like conditions to comprehend those under which the convalescent asylum patient labors. We understand the limitations of a person recovering from typhoid or pneumonia, but I do not think we appreciate the dead weight under which the asylum convalescent staggers of acquired habits of dependence and accommodation to the system of espionage and restraint necessary in all large institutions.

I have been told by intelligent patients that it was many weeks after their removal from an asylum before they could go out of doors or even leave a room without a nervous dread and the sensation that some one was pursuing them and also that it was impossible for me to realize the strain to which they were subjected in readjusting themselves to their old surroundings with the added knowledge that very much that they said, would be discredited and disbelieved. If a man never mentally unbalanced knew that all his acts were viewed with suspicion and distrust, or feared it, would he conduct himself naturally—would he not on the contrary subject himself to suspicion, as did a patient I knew who coming out of an asylum to meet a dreaded grief dared not give way lest she should be accused of a lack of self control, and was actually recommitted in consequence because no one took the trouble to analyze her motives for self restraint, it being easier to consider them due to a lack of feeling than to an excess of self control.

The general personal influence of an asy-

lum is that to which I have already alluded, namely the insane atmosphere. This varies with the institution and with the ward, for there are diversities in the psychical atmosphere of institutions and of wards filled with patients apparently identical in type which our, as yet, imperfect methods of observation have failed to explain. Not all patients are equally susceptible to these subtle influences nor to the gross mental condition of others, but I believe that the insane as a class are far more sensitive to purely psychic forces than the sane and that this is the fact most frequently overlooked in their treatment. That I am correct in this statement seems to me proved by the course pursued even in private institutions. In them, as in all public ones necessarily, there is always a preponderance of insane thinking and the selection of attendants has not yet reached the point where it has been realized that no person can have too much culture, too much intelligence, too much tact, who is to deal with the mind diseased. If it had the whole system of asylum service would be modified and in place of the attendant who now fulfills the duties of both house servant and care taker we should have domestics to perform ward duties and personal physical services, and companions whose endowments training and character fit them fully to supplement the work of the physician.

I once had an opportunity to watch the effect that two attendants respectively had upon the patients whom they shared in common. One was self absorbed, the other self forgetful, one taciturn, the other cheerful, one interested in keeping her position, the other in her patients, and there could not have been furnished a better object lesson. If there were time I could give you a record of individuals who largely owe their recovery to Miss S. in their own opinion, while they never attributed any benefit to their contact with her partner, whose influence they invariably felt depressing and escaped from, if possible, yet she

was considered by those in authority a good attendant and maintained in her position for years, so little is the personality of the attendant considered.

In visiting the State Asylum at Elgin a few years since I was impressed by the atmosphere of a certain ward and said involuntarily to the physician who was taking us through, you have a good attendant here. Yes, he replied, we have, she seems to possess almost a genius for the care of the insane, she is new and has had no training, but she has remodeled this ward in six weeks. I asked to see the girl and questioned her a little. In response to my inquiry as to whether she had any theory in the care of her patients, she replied, "no," except to treat them as if they were little children," and the happy faces of a row of old ladies busily sewing testified to her success. One of them I was told had been extremely offensive in her personal habits, when this attendant was put on the ward, but in a few weeks which had elapsed since then had learned to prize so highly sitting dressed up in a clean white apron on a specially designated bench with the other successful candidates for the daily honor that she had quite reformed. In this girl's own statement of her theory lies I think the key to the situation, although her limited education would not in all probability have taught her to fit it to all locks.

For, if insanity be, as it has been recently defined—a disorder in the process of adjustment of the organism to its environment there should be, theoretically two methods of cure, namely, a correction of the adjustment or an alteration in the environment. "Science has been defined to be a lucid madness occupied with tabulating its own hallucinations" and the inventors, the discoverers, the martyrs, of all ages have been looked upon by a greater or less number of their contemporaries as mad men simply because the latter were ignorant of the height and breadth and depth of the environment to which the object of their

ridicule or pity attuned himself, self-evident as it was to him; but if we leave out this class of persons, namely, those whose widened circle of vision subjects them to a suspicion of a want of mental balance, we find that the majority of the insane have contracted and distorted their horizon and that we could if we were wise enough create for them within its limit a circle of interest and activities which if it did not result in recovery would make them happy and useful.

I believe that inmates of public institutions who are capable of working are capable of enjoying a reward for labor if properly presented to them and that since the State has not condemned them to hard work that no superintendent is justified in utilizing their efforts without some compensation. This may be nominal but it should be tangible and with infinite tact directly devised as a stimulant, not only to the patient who receives it but to those who are too lazy or too indifferent to employ themselves. Here we are again reminded of the necessity for more intelligent personal supervision of every case, the man or woman whose mental capacity will not permit them to earn more than the salary ordinarily paid the asylum attendant is not capable of organizing appropriate plans of stimulation for individual cases and the quota of physicians in any asylum is not large enough to allow them time for this special work. That the public would be amply reimbursed for the added expense of employing proper persons to assist the physicians, by the increase in cures and the value of the work performed, I firmly believe.

The woman physician who quieted and made useful a patient addicted to picking at her clothes by putting her to work picking over feathers illustrates my point, and I remember also a certain man who could not utter one coherent sentence, who called every man John Lupton and every woman Mary Lupton, who yet for years carried all the notes and did much of the shopping for

the attendants of the large asylum in which he was a patient, with unerring fidelity and a serene contentment in feeling himself of use and independent (he was always paid a trifle for his services), which should have been instructive: yet, a superintendent who did not believe in specialization shut him in a ward and did not heed poor Jerry's prophecy that he would be out in doing when Dr. B. was dead and in his grave, a prophecy that was fulfilled within a year.

In turning once more to the consideration of the mental and moral treatment of insanity, I am forced to allude to my knowledge of the fact that we are warned day by day by the students of physiological psychiatry not to believe in hypermaterial forces nor to concede that mind may influence mind *without* as well as through premeditated effort, yet, if we grant that there has hitherto been no science of mind and that recent anatomical research and experiment seemed to promise a more logical basis for theories than the gratuitous suppositions upon which we have hitherto relied are we therefore to conclude that the machine is all? Because a clever thinker of this school assures us that every emotion is derived either from hunger or disgust and that all human conduct is expressible in terms of chemical affinity, has he explained affinity or reduced it to a material substance?

If from the amœba has been evolved the man, and from the hunger for food an equally demonstrable hunger for righteousness are *they scientists* who ignore either the man or his aspirations, or alienists if they do not understand the utmost capacity of contemporaneous humanity, no matter what the source. Although the generally accepted theory of evolution proves, as I am ready to admit, that the physical man is the creation of incontrollable forces which he blindly obeys from hour to hour; that our vaunted free will is in its last analysis the strongest desire, and that our acts are determined in consequence by the alternative which seems potentially the most agreeable

at any moment of our existence has it explained away desired, or deprived us of the opportunity to use it to fulfill our own behests?

Are not the imbecile, the child, the lunatic, educable by us to that degree that measures our capacity to awaken their desires for those objects of possession, or conditions of existence which will insure their most perfect adaptation to their environment. But since insanity, as has already been pointed out, is the inability to adjust the mental relation to the relation in the environment, the cause of this inability must be evident before the alienist can deal scientifically with the defect. Omitting from consideration those cases in which the disordered mental process results from gross organic lesion, I think that it will be some time demonstrated that it is not the thought, in the majority of cases, which is at fault but the underlying emotion, "for everywhere feeling is the substance of what when it is present intellect is the form, since while thought is the establishment of a relation, feeling is the occurrence of a state," or, in other words "the physical substratum of thought is the establishment of a dynamical connection between the two discharging elements which are the physical substratum of the feeling," and it is to the abnormalities in the discharging elements that I think we must chiefly look in the treatment of insanity. These abnormalities may be due to either physical or psychical causes or to a combination of both, and in the accurate apprehension and estimation of the relative importance of these conflicting forces lies the skill of the successful alienist.

The insane brain has been well compared to a harp in which but one string perchance is out of tune yet it destroys the harmony of all, and just as it is only the skilled and tuneful musician who can play upon the musical instrument without emphasizing and increasing the discordance or detect and remedy the flaw so is it only the skilled, sympathetic and humanely tuneful

physician who can elicit harmonies from the unstrung harp of life or determine where the source of discord lies. To women whose emotional nature is so much more varied, whose instincts are admittedly so much more refined than man's must we look therefore, I am persuaded, for the next advance in the psychical treatment of insanity, even though it be left to men to demonstrate the physical basis of mind. Moreover, I believe that women's quicker and keener sympathies will overcome one of the great and insuperable obstacles to the psychical treatment of insanity, namely, the lack of the capacity for sympathy in many a would-be alienist. By their perverted and emotional processes the insane isolate themselves from their fellows, yet I have met few physicians who seemed to comprehend this utter loneliness, or the necessity of establishing a common mental standing ground before argument will be of the least avail in concealing the faulty adjustments of the insane. Many times I have heard patients say "you could not have helped me if you had not believed me," in cases where there had been opportunity to correct morbid processes before they became eased and to compass the silencing of a discordant string until nature had had time to restore its proper tension.

I am also persuaded that the hystero-epileptic and the insane person stand at opposite ends of the scale of psychic sensitiveness, if I may be pardoned for using a self coined term. The first, anxious to be played upon and yielding themselves up so readily for experiment that the personal forces of the hyptonizer appear to stand for naught, the second class, shutting out external influences and apparently so little swayed by others that it has been felt impossible to reach them; nevertheless I think experiment will prove them as I have already stated exceedingly sensitive to the unseen, unheard, unspoken influence of mind upon mind and that there are many men and women who though their own mental and moral balance and capacity for drawing others within the sphere, may act as direct healers to the mind diseased.

COLD APPLIED
TO THE
ABDOMEN
AFFECTS THE
TRACHEA.

BY

W. TOWNSEND PORTER,
M. D.,

*Professor of Physiology and
Lecturer on Diseases of
the Throat in the St.
Louis Medical College.*

Remarks to the Mississippi
Valley Medical Associa-
tion at St. Louis, Sept. 26,
1888, on the use of cold in
acute inflammation.

Reported for PROGRESS.

part, e. g., dependent position, aggravated the pain. Cold contracted the small arteries going to the inflamed area, and lessened pain by lessening congestion. Heat, it was interesting to remember, acted in a somewhat similar way. Heat relieved inflammatory pain by dilating the vascular fields around the inflammation, and thus diverting some of the blood which would otherwise have gone to congest the part, and to make pressure on the nerves.

But the action of cold in acute inflammation was not limited to the relief of pain. He did not need to describe to such an audience the pathological changes of acute inflammation. These changes may be arrested up to the point of active corpuscular diapedesis. How this may be done, and with what precautions it should be done, could be seen from the experiment that would now be shown them.

They saw before them four cats bound upon their backs. The trachea of each cat had been opened in the median line with the galvano-cautery knife, and the lips of the wound held widely apart by weighted hooks that were passed red hot through the tracheal walls. These precautions prevented bleeding. The area of tracheal mucous membrane thus exposed was seen to be congested from the warm poultices which had

Dr. Porter said that Winternitz has shown that cold applied to the skin caused reflex arterial constriction. From this experiment of Winternitz might be learned how cold relieved the pain of acute inflammation—pain which was caused by pressure of swollen vessels (and exudation) on sensory nerves. Anything which increased congestion of the inflamed

been laid on the abdomen. He would replace the hot poultices with cold cloths, and they would see the tracheal mucous membrane grow deadly pale in less than a minute. But this sudden pallor, this vascular spasm, would not be permanent. Before long the mucous membrane would pass through all the stages from pink to deep bluish-red, the color of venous stasis, and venous stasis was the condition most favorable to the progress of inflammation. Much could be learned from the experiment. The power of cold for good, when judiciously used, was only equaled by its power for harm when carelessly used. Applied too long, cold favored inflammation. Cold had been too often recklessly employed. It was especially so in diseases of the respiratory tract.

Unintelligent persons had better not be trusted with this two-edged sword. The duration of each cold application should be short. The applications should be frequently repeated.

THE SOUTHERN
SURGICAL AND
GYNECOLOGICAL
ASSOCIATION.

The Southern Surgical and Gynecological Association will hold its next annual meeting at Birmingham, Ala., on December 4, 5 and 6, 1888. The officers of the association are Dr. W. D. Haggard, of Nashville, President; Dr. W. E. B. Davis, of Birmingham, Secretary; Dr. J. D. Davis, of Birmingham, Chairman of the Committee of Arrangements. The programme is a long and select one, embracing an unusually interesting list of papers by the leading surgeons and gynecologists of this section. In addition to the scientific feast the visitors and members are promised a social treat in the shape of a slice of simon pure Southern hospitality, for which Birmingham is deservedly famous. Reduced rates can be secured on all railroads by getting a certificate from the agent where the ticket is purchased and having this endorsed by the secretary.

BOOKS AND PERIODICALS.

A TEXT-BOOK
OF HUMAN
PHYSIOLOGY.

BY

AUSTIN FLINT,

M. D., LL. D.,

Professor of Physiology and Physiological Anatomy in the Bellevue Hospital Medical College, New York; Visiting Physician to the Bellevue Hospital; Fellow of the New York State Medical Association; Correspondent of the Academy of Natural Sciences of Philadelphia; Member of the American Philosophical Society, etc.

With three hundred and sixteen figures in the text and two plates. Fourth edition, entirely rewritten. New York. D. Appleton & Co., 1888.

The present edition of this treatise has been rewritten, and, while the general arrangement has been retained, the original text has been extensively altered.

The author has endeavored to avoid the discussion of unsettled questions, adopting the new nomenclature of chemistry, without attempting to give a full account of the chemistry of the human body. The author has, fortunately

ly for the popularity of his work in this country, retained the English scale of weights and measures, and the Fahrenheit scale of Thermometry. Employing these old standards in the text the author has, nevertheless, introduced in parenthesis, equivalent metrical measures and weights. One new plate and sixty-one new figures have been introduced, discarding two plates and sixty-three figures from the previous edition.

Digestion is treated in sixty-four pages without exhausting the subject or even making it strikingly clear to the student.

In the chapter on Generation, the remarkable case of Frances Hunt, who gave birth February 4, 1867, to twins, one of which was black the other white, illustrates a principle but little understood concerning the genetic forces of human nature. Whilst it may truthfully be said there is not much that is new in this work, candor compels the recognition of the author's skill and ability in arranging an acceptable text-book for the use of the student. It embraces the results of all the recent researches in this important department of science, and must remain as heretofore one of the most popular text-books.

THE FATAL
ILLNESS OF
FREDERICK
THE NOBLE.

BY

SIR MORELL MACKENZIE.

"Mark now how a plain tale shall put you down."
Henry IV, Act I, Scene IV. London: Sampson Low, Marston, Searle & Rivington, Limited. St. Dustan's House, Fetter Lane, Fleet Street, E. C., 1888. Bretano's, New York, Chicago, Washington, Paris.

For sale in Louisville by
Flexner & Staadecker
330 Fourth Avenue

The readers of PROGRESS are already familiar with the facts which led to the publication of this volume. Common justice compels the admission that the author of this notice was misled by the advance publication in the newspapers of what purported to be the main features of this book. The editorial criticism in November PROGRESS

was based on the advanced publication. The authentic copy now under review is so materially different in both its points and the arguments by which they are supported that it seems necessary for anyone desiring to be familiar with all the facts to give this publication careful reading. The charges made in von Bergmann's publications are of the silliest not to say improbable nature. If any man living merited the distinction of being considered Facile Princeps in Laoyngoscopy that man is Sir Morell Mackenzie; yet von Bergmann charges him with attempting to manipulate a cutting instrument in the larynx with the light of the head mirror reflected on the patient's cheek.

Endo-laryngeal surgery may verily be said to have been born at the hands of Sir Morell Mackenzie. However, we may question the good taste of any attempt at replying to so mean an attack, it must not be forgotten that the attack was first made through the newspapers. That it was not only bitter and relentless but displayed a familiarity with the consulting room, which could have been publicly known in no other way than by the treachery of at least one of the parties to the consultation. Von Bergmann's high reputation as a surgeon is undoubtedly due, as much to his authoritative and commanding civil rank and station, as to his professional and personal worth.

There are very many general surgeons insufficiently familiar with tracheotomy, or the extraction of cataract, to perform either with creditable skill. A nurse familiar with the use of the trachea tube could certainly find no difficulty whatever in passing it through an opening out of which it had but recently come. How to account for the awkward thrusting of such a tube into the loose sub-cutaneous cellular tissue of the neck, taxes the imagination to its utmost. Is it possible the inflamed jealousy of the specialist which seems to exist in the minds of a large number of Medico-chirurgico-Panoplists incited the rude, not to say barbarous thrust at the hands of the haughty von Bergmann?

<p>THE UNIVERSITY MEDICAL MAGAZINE.</p>	<p>The faculty and alumni of the medical department of the University of Pennsylvania announce in</p>
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a handsome octavo of sixty-eight pages, the purpose of that school to enter the field of monthly journalism. The first number appeared October 1st. The salutatory concludes thus:

“Serving thus the general purpose of a medical periodical, and, in a special sense, acting as the organ of the university and of her graduates, the future of this disinterested enterprise may be regarded with entire confidence.”

It has sometimes occurred in the history of medical journalism that “a well recognized hiatus in medical literature” has been filled by the commonest sort of trash, which, though appearing under the pretense of entering the legitimate field of journalism, turned out to be really designed for the puffing of some medical school which felt the need of an advertising circular. It is therefore a gratification to observe that one of the leading medical colleges has entered the field of journalism as a means of extending its instruction. It is difficult to determine whether the responsible editor is to be found in the advisory committee or in the editorial committee. It possesses, however, great literary merit and is published by that active, wide-awake and successful publisher, Dr. A. L. Hummel, of whom it may be had for two dollars a year.

LESIONS OF
THE VAGINA
AND PELVIC
FLOOR.

With Special Reference to
Uterine and Vaginal Pro-
lapse.

BY
B. E. HADRA,
M. D.
AUSTIN, TEXAS.

With eighty-three illustra-
tions. Philadelphia:
Records, McMullin &
Co., Limited, 1888.

The author's aim is to present in a convenient and practical form, an account of the causes, prognosis, symptoms and treatment of lesions of the cervix uteri, vagina and perineum; and of such mal-positions of the uterus, etc., as are usually included in the general term of prolapsus. The work is essentially the same

as published in the weekly issues of the *Medical Register*, of Philadelphia in 1887, with an appendix of sixteen pages. The whole work may be accounted a good presentation of the subject as taught by specialists in this department of practice, in this and other countries. The author describes nearly all the surgical procedures that have been practiced or suggested for the relief of prolapsus, or of lesions of the pelvic floor. As a book of reference in this particular it is useful; but many of these operations are not in harmony with a correct knowledge of the anatomy, physiology and pathology of these structures, and are of no real value. Much that has been written about these operations is worthless rubbish, that is not fit to be reproduced. This is especially true of plastic operations upon the vagina and the perineum; hence simple surgical procedures are made to appear so complicated that they are seldom correctly done. The book is written in a style so attractive as to greatly interest the reader, and is really a valuable contribution to gynaecology.

The work of the publisher has been well done, and, although the text may be in some parts, a trifle dry, it will prove a valuable guide to the student and a pleasantly presented narrative to the general reader.

W. H. W.

CORRESPONDENCE AND SOCIETIES.

JOHN H. LARRABEE, M. D.
*Born January 2, 1866,
 Died November 9, 1888.*

At a called meeting of the Louisville Medical Society and the Medical Profession of Louisville, to take action on the death of Dr. John H. Larrabee; Dr. Dudley S. Reynolds said:

It is a long established custom for the Medical Profession to assemble in respect to the memory of deceased members. To-day the Louisville Medical Society calls its members and the Medical Profession of this city to consider the death of one of its youngest members.

Dr. John H. Larrabee, eldest son of our colleague and brother, Professor J. A. Larrabee, died at his home in this city, Nov. 9th. The deceased graduated with honorable distinction at the Hospital College of Medicine in June, 1886.

Assisting his father in the management of the Clinic for Diseases of Children until January, 1887, young Larrabee went to New York, where he entered the Polyclinical School of Medicine. As a devoted and brilliant student at this institution he won the admiration of his teachers, and the confidence of his classmates.

At the close of the term he returned to Louisville and engaged in practice with his father. Being especially fond of surgery, he made good every opportunity to exhibit his skill in that department. He performed resections, amputations and laparotomy with a familiarity which marked his skill of the highest type.

One year ago he was called to the important office of Demonstrator of Anatomy in the Hospital College of Medicine. He also took charge of the Anatomical department of the Louisville College of Dentistry. In both these schools he was honored by his colleagues and his students as a master of the first degree of excellence in his demonstrations.

Though but twenty-three years of age, he spoke in the councils of his profession as

a man of mature judgment, and with a fluency and grace of style that exhibited the rare talents of eloquence, force and oratory. No man in this community had fairer prospects for a brilliant and useful career in the higher walks of both social and professional life.

In contemplating his translation from the ascending plane of professional renown, we must all bow in humble recognition of the uncertainty of life, and the inscrutable mysteries of the power that so suddenly breaks from our ranks the commanding figure, and lays him still and silent in the cold embrace of death.

Resolved, That in the death of our beloved brother, Dr. John H. Larrabee, the Medical Profession has lost an honored and faithful member; the public, an able instructor and devoted practitioner of medicine.

Resolved, That we tender to his bereaved family our deepest sympathy in the hour of their great affliction.

Resolved, That a committee be appointed by the chair to prepare a suitable memorial of our deceased brother, both for publication and for the permanent records of this society.

The secretary was ordered to prepare the memorial and to forward a copy of these resolutions to the family of our deceased brother, and to the *Medical Press*.

Dr. E. R. Palmer, Dr. M. F. Coomes, and Dr. J. M. Ray, were appointed a committee to design and present a floral tribute in the name of the Louisville Medical Society.

At the commencement exercises of the Hospital College of Medicine, held at Macauley's Theatre, June 16, 1885, the following salutatory address was delivered by John H. Larrabee, then a junior student:

INCEPTURI

SALUTAMUS.

Welcome, ye friends,
 assembled within these
 walls,

Citizens of Louisville, fair "City of the Falls."
 With many yet your greeting still is new,

Albeit ye come to bid our class adieu.
Like fabled fly on bullock's horn,
You scarce have known us e're we're gone.
Yet, we feel that we have added to your own re-
nown,
And oft have helped to paint the color of your
town.

Now if any here should seek to enter complaint,
Or talk of restriction or students' restraint,
We grant them forgiveness, whatever it be,
For our art was first nurtured by Egypt's dark
sea ;

And if I mistake not, in Ptolemy's rule,
Alexandria gained fame through her medical
school.

And to this end all advantages enter
To make Louisville a great medical center.
Ladies, matrons, and maidens, none more fair,
Welcome, ye partners of our toil and care.
Welcome, ye captains, ye remaining few,
Whose words instruct and urge us to pursue.
Ye, who teach us painful wounds to heal,
To stanch the blood, or use the glittering steel ;
Ye who for subtle poisons the antidote prepare,
And show the wonders of the earth and air ;
Ye who from bitter root or mineral inert
A draught prepare with skill expert,
And from tree or shrub, in liquid or in pill
The leaf infuse or styptic juice distill :
Ye who show the wonders of the ear and eye
And teach us how to live, all falsities decry ;
Ye who teach the practice of the healing art,
To guide the fever and regulate the heart ;
Ye who teach the workings of the human brain,
And from the chest sonorous notes obtain ;
Ye who show the wisdom of God's great plan,
And teach to preserve the progeny of man ;
Ye adjuncts true, by whose direction
We have been taught to make the skilled dissec-
tion.

We greet your presence here to-night
With unfeigned pleasure and sincere delight.

Shades of the departed, in life's battle slain,
Come ye not back to-night again ?
Sit here and yon broken circle fill ;
Know that ye are welcome still.
Ah ! methinks I hear your voices say
What the poet sang in his declining day :
" Better like Hector in the field to die,
Than like perfumed Paris turn and fly."
There's another welcome I would fain extend
To one more loved, more prized, than any friend
To where the cypress stands by moaning pine,
Or o'er the rugged hills where blooms the eglan-
tine,

Where by the homestead with its open door,
Stand the cotton-wood or the sycamore,
Or where that mighty river widens to the sea,
A mother waits to welcome thee.
That mother's prayers are seasoned with her
tears,

Her thoughts recall the scenes of other years,
When from that doorway in his pride,
Passed he who first did call her bride.
And now her first born son, her only boy,
She consecrates to science, to save and not de-
stroy.

O, war, thy victories on land and wave,
Are not like triumphs o'er the grave.
O, woman, thy weaker nerve might thee forbid
To do the things which surgeons did.
Thy province is to watch the fleeting breath,
Thy words to linger in the dull, cold ear of death.
As Sybil from her lover's wound the poison drew,
Nor shrank through fear such deed to do.

So thou dost the sting of pain remove
By thy tender care and faithful watching love.
Men love to recount the bloody tale of wars,
To show their wounds and count their many
scars,

And, wrapped in thought, delight to dwell
Where brave men fought and heroes fell.
Nor less do I delight to turn the page
Which marks our art from age to age.

I love to read of heroes, of warriors true and
brave,

Of those who fight the flame or plunge beneath
the wave ;

Of men who climb the masts that with the tem-
pests reel,

Of those who guide the helm, of Maynards at the
wheel,

For where they fought, in battle's blinding glare,
Fighting an unseen foe, our surgeons, *too*, were
there.

I also honor those who dared to do and die
On nobler battlefields, when Hickman was the
cry.

Not all who at Marathon and Loeuctra bled,
Nor priests who at the altar ministered,
Through all the long unnumbered years,
Have cheered more hearts and dried more tears
Than he who first did classify disease,
" The divine old man," Hippocrates.

How marked the writings of that Coan sage—
How suited yet, to men of every age,
Directed alike to Plebeian and Patrician,
These words, " Nature is the best physician."
When wars were rife, and blood was freely spilt
On English heath and Scotia's plaided kilt,

Sylvius and Vesalius, in the Latin school,
First made anatomy as a science rule.
While Francis' court sat toying with their cubes,
Eustachius and Falopius were hunting up their
tubes.

When Cromwell had returned from Cambridge
school

And James with all his wisdom played the fool,
When Henry's death brought grief to all the
nation,

Harvey showed the wonders of circulation.

Next we see how, face to face,

The foe advanced upon the populace.

Scarred and maimed, with bated breath

The world saw Jenner close the gate of death.

Enlarged views do best become the inquiring
mind,

Theories oft destroy the light and make their
followers blind.

Not he who allows his prejudice to rule

Or holds the dogmas of a certain school;

But he who from all sciences draws his power,

As doth the bee from many an humble flower.

Nor binds himself to any sect or creed or plan,

Will best advance the truth and elevate the man.

Not luxury nor ease can best the surgeon's art ad-
vance,

And cruel war makes way for keener lance.

Greatest minds from humble source have sprung,

And lasting fame by obscure men been won.

On this dark and bloody ground, our own Ken-
tucky,

In those early days when men were brave and
women plucky,

McDowell, a country doctor, with his skillful
knife,

Led the world and added years to woman's life.

Surgeons then made the bold attack,

The victim endured the tortures of the rack;

Nerves were compressed and ice was used in vain,

Till Morton's discovery brought relief to pain.

Across the sea, where meets the land and ocean,
See, wavering in the fight. Death's cohorts in
commotion,

Flee in chariots of air, pursued by every nation,

Till earth takes up the cry of public sanitation.

And where the ancient columns of Hercules ap-
pear

Rises the lovely figure of the goddess "Hygeia."

See with what stately march dread cholera comes,

Gathering strength from India's dismal slums;

And, marked by corpses of her million slain,

Like Sennacherib's host encompasses the plain.

Men leave their tasks to build a barricade,

But by our art the dreadful plague is stayed.

Mark how our leaders, Pasteur, Koch and Klein,

Recruit their ranks and plant their guns in line,

And patiently, with microscopes adjusted,

Expose the subtle foe with error deep incusted;

And now we see how Death has tried to kill us;

With micrococci and the new bacillus;

How the life of man hangs on his potations,

Drinking "commas" puts an end to his "quota-
tions."

To feel the pulse and count the rapid breath

Is not enough if we would cope with death.

To find the cause of disease in old and young,

Just bring us the scrapings of his tongue.

We who are about to begin? No, we who have
begun,

Thanks to our teachers for the laurels we have
won.

Oft with you we have been called to meet,

In alley, lane or broader street,

Wherever God's poor people dwell,

The lame, the blind, whom Jesus loved so well.

Can we forget that sick and suffering child,

Who, in its pain, looked up and sweetly smiled?

That Christian mother who, with tears and
prayers,

Asked God "to bless you" as you climbed the
wretched stairs?

Have you forgotten where we removed that pain-
ful joint?

'Twas somewhere near the river, over the Point.

Oh! we are warriors, whose sharpened spears

Draw from the sufferer thanks instead of tears.

Now, kind friends, your attention, while I strive

To introduce the class of 1885.

This class, 'tis said of all the best

Which we know has been said of all the rest.

Classmates, comrades, soldiers, such ye are

Commissioned, armed, equipped for war,

Ye knight of pill and lance and knife,

Welcome to the unequal strife,

Could I your muse, by some gift attain

To something of prophetic strain,

And in this short, imperfect rhyme

Forecast the horologue of time;

Could I, by magic power, discern and name

The few who wait on wealth or fame,

Whom fortune favors or the fates despise,

Or in whose pathway rests the ladder to the skies—

It would avail me little, and please me less

Than to sing of those not flattered by the world's
caress;

Of those who may not reach the acme of success,
 And those in humble walks to bless.
 The village doctor, with the world content,
 Whose life for others' good is spent,
 Whose tender heart and pitying ear incline
 To relieve the suffering of mankind.
 Nor strives for vain ambition's sake
 The top-most seat in foremost rank to take,
 Not rich, not poor, honored, loved and trusted:
 Not surfeited with goods, and not completely
 "busted,"

Each day, each night, sees him some message fill,
 Along the peaceful vale or o'er the storm-swept
 hill.

Great and good in a humanitarian sense,
 With little thought or care for recompense.
 A lowly cottage covered over with vines,
 An ill-kept ledger full of empty lines.
 And drawn from the friendship of his student
 life,

His wealth, a faithful, loving, Kentucky wife,
 And all his envied happiness to share,
 Some lisping lips, some heads of golden hair.
 To each I trust some good will fall,
 Some sweets be mingled with life's bitter gall.
 Such I ween shall be your happy lot,
 Not forgetting and by others not forgot,
 And in our catalogue from year to year
 Your name and stations still appear.
 May the years run by and Time himself forget
 Against your names the asterisk of death to set.

Thus cajoled by fate and spared by time,
 Scattered abroad in almost every clime,
 In the sunset of life, as in earlier years,
 Like fancies, our morning again appears.
 We will take down the picture from memory's
 walls

And bless thee again, "fair city of the falls."

RESOLUTIONS.

At a called meeting
 of the Alumni Association of the Hospital College of Medicine
 the following resolutions of condolence and
 sympathy were adopted:

WHEREAS, Our brother alumnus, Dr.
 John H. Larrabee, has been removed by
 death, and

WHEREAS, We deem it eminently appropriate that the Alumni Association of the
 Hospital College of Medicine should take
 some action upon the death of Dr. Larrabee,
 therefore be it

Resolved, That we deplore what appears

to our finite minds the untimely removal of
 our young brother. We shall miss his
 bright and happy face at our annual gatherings;
 we shall miss his counsel in matters
 pertaining to the interests of this association.
 We remember with great pleasure,
 as president of this association, his impartial
 rulings, the superior interest he manifested
 in its prosperity, his unflagging zeal
 and faithfulness in promoting its usefulness
 and welfare. Be it further

Resolved, That we extend our heartfelt
 sympathy and condolence to his bereaved
 widow and orphan child, and to his loving
 parents and kindred.

Resolved, further, That we direct our
 secretary to send a copy of these resolutions
 to his family and that a page on our minute
 book be dedicated to his memory.

JNO. G. CECIL, }
 I. C. EVANS, } Com.
 B. A. ALLAN, }

H. E. PEELE, Sect'y.

Similar resolutions were also adopted by
 the faculties of the Hospital College of
 Medicine and the Louisville College of
 Dentistry, in both of which institutions he
 was Demonstrator of Anatomy.

THE MITCHELL DISTRICT MED- ICAL SOCIETY.

A society composed
 of the medical profes-
 sion of the southern
 part of Indiana, in-
 cluding a number of names of members
 from Louisville, Indianapolis, Chicago and
 St. Louis, meets semi-annually and has
 grown to be one of the best working organ-
 izations in the Ohio Valley. Its next meet-
 ing will be held at Seymour, Ind., Dec.
 27th and 28th. Reduced rates of travel on
 all the railroads have been secured. Dr.
 John D. Simpson of Bloomington, is Presi-
 dent. Dr. James Shields of Seymour, is
 Chairman of the Committee of Arrange-
 ments. The programme is now being pre-
 pared and is said to embrace the names of
 the best essayists and most experienced
 practitioners in its membership.

PROGRESS

A MEDICAL MAGAZINE ISSUED MONTHLY.

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THOMAS C. EVANS, M. D., ASSISTANT EDITOR.

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VOL. III. LOUISVILLE. NOV. 1888. No. 5

KENTUCKY

LAW.

At the last session of the Kentucky Legislature an act was passed amending the act of 1874, concerning the qualifications of persons offering to practice medicine in this State. The amended law requires every physician so engaged, or who may hereafter engage in the practice of medicine in Kentucky, to register his diploma in the clerk's office in the county in which he proposes to practice. Every diploma, except those issued by medical colleges chartered under the laws of Kentucky, must be certified or indorsed as coming from a reputable and regularly chartered medical college before it can be registered in the county clerk's office. Certificates of medical colleges and regularly organized examining boards will be refused recognition under the new amendment. State medical societies, both regular and homeopathic, are, with the faculties of the medical colleges in this State, commissioned to determine the proper character and endorse diplomas issued by other institutions than those chartered by the law of Kentucky. All the authorized bodies have delegated this power to Dr. Joseph N. McCormack of Bowling Green, Ky. Diplomas requiring to be endorsed should be forwarded, with the full name and address, in-

cluding the county, of each physician now practicing in the State, or who may hereafter engage in the practice of medicine. Any physician whose diploma has been lost must obtain a duplicate or an official certificate of graduation from the college issuing it. No person who is not a graduate of a lawfully chartered and regular medical college, or who was not engaged in the practice of his profession prior to February 3, 1864, can be allowed to continue, or be authorized to engage in the practice of medicine in this State after April 1, 1889. The act provides heavy penalties for the violation of this law, and to secure its enforcement the Secretary of the State Board of Health will proceed at once to make up an official register of the State as soon as all the county registers are completed. Physicians desiring to avoid legal complications must proceed at once before April 1, 1889, to register their diplomas, and if there are any in the State who have no diploma and who were not engaged in the practice of medicine in this State before February 3, 1864, they will be arrested and punished according to law, after the time above specified. The people of Kentucky have enjoyed a degree of freedom in the choice of physicians and have been bounded by no limits. Some of our excellent citizens have sometimes thoughtlessly allowed professed quacks to undertake the experiment of prescribing for the relief of their greatest afflictions. These may in future be protected from such dangerous experiments, while the insolent quack and bare-faced mountebank will be required at least to exhibit the certificate of authority prescribed by law as a designation of their qualification to engage in the practice of medicine. There are some nice distinctions to be made in the enforcement of this law. Jurors may be called upon to determine whether a person attempting the adjustment of a truss for the relief of hernia, is not guilty of prescribing in the sense of an attempt to engage in the practice of surgery.

It will become necessary for jurors to determine whether those engaged in attempts to relieve painful conditions of the eyes by the adjustment of spectacles are not prescribing with in the meaning of the law. Sick headaches, melancholia and many painful conditions of the eyes are relieved by the scientific application of lenses to the correction of defects of refraction and accommodation of the eyes. This requires a practical knowledge of the principles of pathology and therapeutis and is one of the most responsible duties the especially skilled practitioner of medicine is called upon to perform. An attempt to exercise this power or to perform this service is undoubtedly an infringement of the law as it now stands. Guilty parties will therefore take notice and govern themselves accordingly.

AN OUTRAGE.	A few weeks ago Mr. J. B. Quin, a clerk at Mr. Simon Jones' drug store in this city, presented a diagram of a small cabinet with a picture representing the cabinet to contain three rows of bottles designed for such articles as castor oil, chloroform, collodion, tincture of arnica, and other similar un-mixed drugs for household use and for emergencies. Mr. Quin brought a letter setting forth its purposes and bearing the signature of Dr. W. T. Leachman, endorsed by Drs. P. R. Henderson, T. H. Stucky and C. B. Blackburn. Being assured by Mr. Quin the cabinet was to contain nothing but such articles as were described, the editor of PROGRESS was induced to certify that such a cabinet would be useful and convenient for the household.
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Since then circulars have been distributed broadcast announcing that the cabinet contains "Liver Pills," and is accompanied by a copy of "OUR FAMILY PHYSICIAN." The book entitled "Our Family Physician" is advertised on the opposite side of the circular descriptive of the cabinet which it is said to accompany. This book is heralded

with endorsements of "distinguished physicians," not a single one of whom was ever known in the ranks of the regular medical profession. Mr. Quin's imposition deserves the widest and most extensive exposure.

KENTUCKY STATE MEDICAL SOCIETY.	It is expected the next meeting of the Kentucky State Medical Society will be the largest and most important ever held by this body. What is known as the Medical Practice Act will be enforced by law from the first of April, 1889. Dr. J. N. McCormack, of Bowling Green, Secretary of the State Board of Health, expects to have the entire profession of the State organized into county societies, and to publish a complete directory of the medical profession in Kentucky before that time.
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The next meeting of the State Society will be held at Richmond commencing the first Wednesday in May 1889. Dr. Louis S. McMurtry, of Danville, is the President; Dr. John M. Foster, of Richmond, is Chairman of the Committee of Arrangements; Dr. J. Steele Bailey, of Stanford, is the Permanent Secretary. Reduced rates of travel have been secured and the good people of Richmond are exerting themselves to provide in a most generous and hospitable manner for the meeting.

The variety and character of the papers already shows the attendance will embrace a large number of the best men in the State, whilst the subjects to be considered will be such as are of the most recently mooted and practical.

JOURNAL OF THE A. M. A.	Begining with January 1889 Dr. John Hamilton, Surgeon General of the Marine Hospital service, will take editorial charge of the Journal of the American Medical Association, vice Dr. N. S. Davis of Chicago. PROGRESS tenders congratulations and regrets.
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PUBLISHER'S DEPARTMENT.

ROGERS-TULEY COMPANY, Publishers.

Address all matter relating to this department to the Publishers, 235 and 237 Third Avenue.

The Publisher's Department of PROGRESS is designed to afford the Business Editor proper space, in the regular order of our system of classification of the text, for such notices and comments as he may feel inclined to make of meritorious articles, and such items of news as may seem to him best calculated to interest the readers.

No house will, therefore, be able to purchase space in this department.

PAPINE.

Dr. Chas. H. Merz, the house physician to University Hospital at Cleveland, Ohio, April 25, 1887, said: "I have made use of PAPINE for some time past, both in hospital and private practice, and find it a most agreeable substitute for morphine and opium. It is the anodyne *par excellence*."

NON ANGUIS

IN HEBRA.

A knowledge of what the physician is prescribing is essential to the correct application of therapeutics. A competing firm has perpetrated a slander before the medical profession and the public in claiming that their preparation of caffeine was imitated. They are too cowardly to give the name of the firm, neither do they give the composition of the remedy they are advertising, how therefore could there be any imitation practiced? The assertion is a slur on the intelligence of the medical profession. Bromo soda was originated and introduced by us; bromo chloralum by Tilden. How could the Doctor be expected to do otherwise than prescribe effervescent bromo soda (containing bromide sodium, grs. 30, caffeine, gr. 1, in each desertspoonful), as published to the profession; or bromo potash (containing bromide of potash 20 grains, and caffeine 1 grain)? Hence we say: "No snake in the grass," meaning that ours is not a secret remedy, and such as the doctors can use with confidence, with better and more certain effect. Prescribed

in desertspoonful doses in half a goblet of water, and taken while effervescing. In all cases of headache, migraine, insomnia, nervousness, etc., specify bromo soda or bromo potash (Wm. R. Warner & Co.) to avoid disappointment by substitution.

WILLIAM R. WARNER CO.

SOLUABLE

FOOD.

The Medical Record.

October 13, 1888.

"A CORRECTION.—

The *Boston Medical and Surgical Journal*, from which an extract was quoted by *The Medical Record* bearing on the composition of several artificial foods, publishes a correction based upon the analyses of Professors Elwyn Wallers and A. A. Brene-man regarding Reed & Carnrick's soluble food, to the effect that 38.26 per cent. of the albuminoids which it contains are in soluble form, that no 'hard unchanged particles of casein' were found, that the casein is partially rendered soluble by the action of the digestive ferment. That the proportion of albuminoids in liquid peptonoids is limited only by the quantity which can be kept unchanged in solution, that sixteen per cent. of alcohol is necessary to prevent decomposition of the albuminoids, and that no greater than three per cent. of these can be held in solution in this liquid. We publish the correction from the same source as the original quotation as an act of justice to all concerned, regretting that we, in common with our Boston contemporary, were in any manner misled by what appeared to be a well-authenticated official report."

WINE OF COCA.

One of the most valuable medicines in cases of nervous prostration is wine of coca. It is important, however, the wine should be made of carefully selected materials. Messrs. R. A. Robinson & Co., of this city, use a carefully assayed variety of coca leaves, and a pure and elegant quality of California Sherry, obtained from a perfectly reliable vineyard. This wine is, therefore undoubtedly pure, and of uniform strength.

PROGRESS

A Monthly Magazine for Students and Practitioners of Medicine.

"I HOLD EVERY MAN A DEBTOR TO HIS PROFESSION; FROM THE WHICH AS MEN OF COURSE DO SEEK TO RECEIVE COUN-
TENANCE AND PROFIT, SO OUGHT THEY OF DUTY TO ENDEAVOUR THEMSELVES, BY WAY OF AMENDS, TO BE A HELP AND
ORNAMENT THEREUNTO. THIS IS PERFORMED, IN SOME DEGREE, BY THE HONEST AND LIBERAL PRACTICE OF A PROFES-
SION; WHEN MEN SHALL CARRY A RESPECT NOT TO DESCEND INTO ANY COURSE THAT IS CORRUPT AND UNWORTHY THEREOF,
AND PRESERVE THEMSELVES FREE FROM THE ABUSES WHEREWITH THE SAME PROFESSION IS NOTED TO BE INFECTED; BUT
MUCH MORE IS THIS PERFORMED, IF A MAN BE ABLE TO VISIT AND STRENGTHEN THE ROOTS AND FOUNDATION OF THE
SCIENCE ITSELF; THEREBY NOT ONLY GRACING IT IN REPUTATION AND DIGNITY, BUT ALSO AMPLIFYING IT IN PROFESSION
AND SUBSTANCE."—BACON.

VOL. III.

LOUISVILLE, KY., DECEMBER, 1888.

No. 6.

GENERAL MEDICINE.

PERFORATING ULCER OF THE DUODENUM.

BY

J. M. EMMERT,

M. D.

ATLANTIC, IOWA.

Read to the Mississippi Val-
ley Medical Association
at St. Louis, Sept. 27, 1888.

My object in pre-
sents this paper is
to place upon record
another case of simple
round or perforating
ulcer of the duode-
num. The case was
an obscure one during
the time I was his at-
tending physician, and
was only cleared up by

the post mortem. It being the first case of
the kind met with in my practice, I became
much interested in the subject and began a
thorough search of all the medical literature
at my command. I was surprised to find
almost nothing upon the subject in some
five or six hundred of the best medical
journals that had been accumulating for the
last fifteen years, and a very meager descrip-
tion in the text books and special treatise
upon the intestines; in fact, many text books
do not mention it at all, while others give a
very cursory description in connection with
ulcer of the stomach. It seems to me that
this is unfortunate, because it produces con-
fusion in attempting to make a differential
diagnosis; the clinical history of the two
diseases being quite different. If the de-
scription of the case I am about to give will
help to clear up the obscurity surrounding
the majority of these cases, the object of
this paper will have been attained.

Mr. J. P. G., age 55 years, was born in

Bucks county, Pa., of German parentage;
his early life was spent in out-door work;
after the age of twenty-five was mostly en-
gaged as bookkeeper, clerk and bank
cashier; health good until twenty-five years
of age, when he had the first attack soon to
be described; he had these attacks two or
three times a year during the balance of his
life. From the time I became acquainted
with him fourteen years ago, he always pre-
sented the appearance of a person who had
considerable digestive trouble, the skin be-
ing of a dark jaundiced hue. He was quite
active and fond of field sports, and always
felt better after one of these excursions. I
never knew him to drink to excess, although
he liked a glass of beer.

The attack, or spell as he termed it, men-
tioned above, occurred thirty-two years be-
fore his final sickness; it came on suddenly,
felt faint, considerable nausea and pain that
was difficult to locate; it lasted about one
hour and passed away. One year from that
time he had another attack of that kind,
and this continued to occur from two to
four times a year the balance of his life.
In the spells during the last years of his life
he would become jaundiced and vomit ex-
cessively. The spells the last few years
would invariably come on about the middle
of the afternoon, last one or two hours,
then pass away, leaving him quite weak; he
complained more or less of an ill-defined
pain, sometimes directly after meals, and
sometimes not for several hours after eating.
He said he never could exactly locate the

pain, but it was of a sickening, gnawing character; this was especially so if he indulged in rough or fibrous articles of food, such as cabbage, turnips or corn. His bowels were usually constipated, alternated occasionally with diarrhoea; there never was any hemorrhage to his knowledge. During the last year or two of his life his trouble increased. He talked considerably about his disease and at times became depressed in spirits.

August 23, 1887, I was called to see him for one of his bilious attacks, found him with a temperature of 100, pulse about 90, tongue coated brown, and some pain in gastric and right hypochondriac region; he had been constipated some days, so I ordered a cathartic. At four o'clock next morning I was hastily summoned to his bedside and found him sitting up in bed, leaning forward holding his abdomen, suffering intensely, so much so that he could not lie down or even speak; soon found that he was in a state of collapse. His wife then informed me that he had vomited several times during the night, and in the last attack of vomiting, which took place but a short time before, the severe pain suddenly came on. He lingered until six o'clock next morning, when he died.

Autopsy twenty-four hours after death. On opening the abdomen there was found violent peritonitis and some effusion in the peritoneal cavity. On the side in the horizontal portion of the duodenum, close to the pylorus was found an ulcer, also one on the posterior horizontal portion. Each of these ulcers was about three-eighths of an inch in diameter. The ulcers had a punched-out appearance, the walls being perpendicular, the ulcer cavity being as large at the bottom as at the top; the walls or sides of the ulcer were perfectly smooth, showing no ragged or projecting points. The floor of the ulcers was composed of the peritoneal coat only, and when the one that was perforated gave way, the peritoneal coat tore clear across the bottom of the ulcer; in fact, it was not a perforation, but a tear from

violent retching. You will notice two anomalies in this case: first, the location of the ulcers, a large majority being located in the superior horizontal portion of the duodenum. In the forty-seven cases collected by Krauss, only two were situated in the lower horizontal portion and none on the side. Second, the appearance: A large majority of the cases as given by the differ-writers on this subject, present a funnel or crater-like appearance, the bottom of the ulcer many times not being more than one-fifth as large as the mucus opening.

In the case just presented the ulcers had the appearance of being punched out, they were clear cut and the sides and floor completely organized and smoothed off, showing that they were of long existence.

These ulcers are undoubtedly chronic in their nature, the necrotic process going on sometimes for years. The pathogenesis of the perforating duodenum ulcer is the same as that of the stomach; it is a true peptic ulcer.

The first pathological condition in the origin of this ulcer, either in the stomach or the duodenum, is an interruption of the circulation. Virchow, Muller and Rindfleisch have established the fact that either thrombosis or embolism of the small arteries, stasis of the venous circulation or an extravasation of blood in the mucus or submucus tissue, causing the death of a circumscribed portion of the duodenal wall.

The second stage in their production is the action of the gastric juice upon the necrosed tissue; the acid secretion of the stomach comes in contact with the necrosed tissue before it meets the pancreatic juice and bile and undergoes an alkaline reaction. This acid fluid acts as a solvent of the devitalized tissue, which gradually breaks down until the organ is perforated; or, as Fox and others have demonstrated, cicatrization takes place, and the danger is stayed; or as in my case, the pathological process is arrested only when the peritoneal coat is reached, to be at some future time mechanically ruptured.

Prof. W. W. Johnson of Washington, D. C., in a most excellent article in the *American Journal of the Medical Sciences*, asks the question: "Is the diagnosis of duodenal ulcer possible, and can it be differentiated from gastric ulcer?" That it is not possible to make a correct diagnosis in many cases one has only to study the causes on record. In many cases the trouble was not suspected and was only discovered by the post mortem. The first case placed upon record (by Roberts) was that of a young man who had no symptoms except, vague pains in the epigastric region for some time, finally nausea, loss of appetite and general malaise.

In Osler's nine cases there are four with little or no antecedent history. E. B. Gray reports a case where the only history was that for two years previously, he had pain across the pit of his stomach and through to the loins. This patient died suddenly from hemorrhage caused by ulceration of the pancreaticoduodenal artery. A number of cases presented no symptoms except those of indigestion. Wilson Fox says: "The symptoms characteristic of this disease are pain, vomiting, hemorrhage and disturbance of the digestion." When we come to analyze these cases we find that a very few present all of these symptoms. We cannot always rely upon the diagnostic symptoms of pain, because sometimes there is almost a complete absence of pain, and where it does exist, in some cases it is so vague and ill defined that it is almost impossible to locate it. In my case the patient could never definitely locate the pain. Prof. Johnson's case, Bucquoy's cases and cases of others which have been placed on record, located the pain in the right hypochondrium, with tenderness.

This of course, will not be a characteristic symptom, but not more than 113 of the cases I have been able to find presented this diagnostic symptom. One-fifth of the cases collected by Krauss, where there was perforating or hemorrhage, there was no noticeable pain. Wilson Fox gives a number of

cases in his work on diseases of the intestines, where pain was a prominent symptom; but every one of them was complicated with some disease of the liver or adjacent organs, and should consequently be excluded. Where pain over the duodenum is a prominent symptom it is one of the best differential diagnostic symptoms between gastric and duodenal ulcers; the pain in ulcer of the stomach coming on almost immediately after eating, while in ulcer of the duodenum it does not commence for an hour or so after eating. The reason of this is, of course, very apparent.

Hemorrhage from the bowels is another symptom considered as diagnostic. Yet we find that it is absent in a majority of the cases. Wilson Fox says that it occurs in about one-third of the cases; Johnson says that it is the symptom upon which the most reliance can be placed; Bucquoy lays much stress upon it. Of sixty-three cases collected by Chovostek, death occurred from hemorrhage in fourteen; no mention is made of the number of hemorrhages where death did not occur.

There never was any hemorrhage in this case to the knowledge of the patient or his family.

When hemorrhage does take place the blood may be vomited, but is much more liable to be passed by the bowels; when it does not pass in this way it always has a thick, tarry appearance. Johnson says: "By the appearance of the blood passed alone, we can diagnose the disease."

Vomiting is a prominent symptom in some cases; the matter vomited is usually of a bilious character, if soon after a meal, the contents of the stomach; sometimes, as in Gray's case and several others, a large quantity of blood is thrown up.

In my case vomiting always took place during the severe attacks of enterralgia; a noticeable feature of this case was the jaundiced appearance during and following these attacks, although no disease of the liver was found. Fox alone mentions this symptom.

GENERAL SURGERY.

Symptoms of indigestion are almost always present; constipation is not so frequent as in gastric ulcer. There may be constipation alternated with attacks of diarrhoea.

In making a differential diagnosis between gastric and duodenal ulcers, sex and age would be an important factor, the gastric ulcers being most frequent in females, and the duodenal in the male; in fact, very few cases of duodenal ulcers in the female are recorded. Out of Krauss' sixty-four cases, fifty-eight were men, and the statistics of other observers are in about the same proportion. Duodenal ulcer is most common between thirty and forty; gastric ulcer between twenty and thirty. The treatment is about the same as for gastric ulcer; rest is essential, the food should be bland and un-irritating, such as milk and broths. It is doubtful whether any medicine has much effect in producing cicatrization, which is the object to be attained if possible.

GOOD LIVING.	Scholars in every department of knowledge have written on the science of good living. Gastaldy prescribed "a biscuit for drinkers," which was composed of a slice of cheese placed between the halves of a previously buttered biscuit.
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This was made the subject of considerable discussion eighty years ago when Mr. Wallace, one of the editors of the *Family Oracle of Health, Economy, Medicine and Good Living*, promulgated his preference for Dutch cheese well salted and "hotchin wi' mites." The "pandemonian biscuit," the formula for which, it has been stated, was got from the Devil, became famous at many a British Inn. It was made as follows: Anchovies boned, washed, and pounded in a mortar with fresh butter, mustard, curry powder, cayenne pepper, and mace; this mixture to be passed through a sieve and spread over a fine biscuit previously heated in a Dutch oven. It was said to make a cup of good drink relish well.

PRACTICAL
POINTS IN
DENTISTRY.

BY
WILLIAM CONRAD,
D. D. S.
ST. LOUIS, MO.
Read to the Mississippi
Valley Medical Association,
September 27, 1888.

The recent action of the American Medical Association and of the Ninth International Medical Congress in asking dentists to become permanent members and to take part in the deliberations of those bodies will do much to create

a class of practitioners more in harmony with the general sentiment of advancement. The knowledge of the medical world to-day is too extensive for any one man to become generally proficient; all that can be expected is that the members be thoroughly grounded in the fundamental principles of medical science, and then prepare for that special department for which they are by natural talent best suited.

Having had considerable knowledge as to the workings of both medical and dental schools, I do not feel that I am claiming too much for dentistry when I class it as one of the legitimate specialties in medicine.

In order to show you that the recognition, which the American Medical Association has extended to us, is not without good foundation, I will say that the dental colleges of this country require of their students a preparatory education, this to be determined by a preliminary examination; one year of study before entering upon a course of lectures, and two years in some reputable dental college before being admitted to graduation. Most of our schools are now connected with state universities or medical colleges, the course of study being the same for both medical and dental students, with but few exceptions.

At a recent meeting of the Association of Dental College Faculties, a resolution was introduced to extend the time of the college term to three years, the lecture course to be not less than five months each.

year, and the balance of the time to be devoted to practical work in laboratory and infirmary.

At a joint meeting of the American Dental Association and the Southern Dental Association, held at Louisville, August 28 to 31, 1888, the general sentiment of those present was for a broader culture and a more extended course of study; for example: Preliminary education in some college or high school, graduation from some reputable medical college, after which special instruction in some dental college, with perhaps a post-graduate course in oral surgery. This you will observe gentlemen, will be quite an elaborate preparation for the practice of dentistry; but the sentiment in our specialty for this advance, is constantly on the increase.

I have been told by my medical friends that there is a need for a more intimate association between physician and dentist. Especially is there a necessity on the part of the general practitioner, for a more thorough understanding of the principles of dental science. I found this to be true while attending medical lectures, the students being totally ignorant as to dental diseases and dental treatment, there being little if any instruction on these subjects.

I will now outline briefly some of the most important things with which the general medical practitioner should be familiar.

CARE OF THE TEETH.

The public generally, and the physician in particular, should understand what is required to keep the teeth clean and the contiguous parts in a healthy condition. Cleanliness must be insisted upon, and could this be obtained there would be no further trouble; but as absolute cleanliness is impossible owing to our manner of living, to approximate this is all we can expect. The teeth from the eruption of the temporary or deciduous set to the end of life should be cleaned at least once a day, before re-

tiring—with tooth brush, tooth powder and warm water. *Every surface of every tooth* should be brushed *every day* in *every direction*. Tooth picks should be used after each meal. The tooth brush should be medium in stiffness; the powder should be precipitated chalk. No substances, such as *liquids, soaps, grits* or *acids* should ever be permitted in the hands of the patient. If the teeth can be kept perfectly clean there will be little or no decay, and consequently no need for repair. A competent dentist should be consulted often enough, to prevent any loss due to lack of proper attention.

The temporary teeth are twenty in number and play an important part in the human economy. They should be preserved until the permanent ones are ready to take their place. The premature loss of these organs, is the cause of many dangerous complications. Cavities of decay in them should be filled, even at the age of two years. When you find deposits or stains on them, these should be removed. The child should be instructed to brush the teeth and mouth from the very first.

The permanent teeth commence to erupt at about six years of age. The first tooth of the set to erupt is the first molar, which in many cases you will mistake for a deciduous tooth, unless the subject has been brought especially to your notice. It should be looked to, and cared for, as it is the most important tooth in the mouth. Many times it will be found decayed to the pulp, before any danger is suspected; then the greatest skill is required to save it.

Cases of dental irregularity should be corrected at the proper time, and directions as to how to do this can only be given after an inspection of each and every case, as no two are treated exactly alike.

Extraction of teeth is an operation you are often called upon to perform, and unless you are thoroughly acquainted with the value of these organs, many teeth and roots will be lost. A complete set of teeth is rare,

and indiscriminate extraction has done much to make it so. I have seen cases where the extraction of one or two teeth has resulted in the loss of the entire set. No tooth or root should ever be removed except for a specific purpose, and the reasons for the operation perfectly understood by the operator. The patient should never be considered a good judge in such cases. No artificial substitute can ever replace, in usefulness, a fully developed and complete set of teeth. Anæsthetics, as used to relieve pain when extracting teeth, should be deprecated, and practitioners who advertise anæsthetics or gas given, etc., should be discountenanced by medical men. The dangers are too great for such minor operations, and it favors the loss of many good teeth.

The treatment of pulpless teeth has become with us almost an exact science. A root canal that has been properly treated and perfectly filled to the apex of the root, should never give trouble, or become sore through pericemental inflammation. This fact is not generally known and results in the loss of teeth and roots that might otherwise be saved. Neuraglic cases, that are attributed to the teeth, may just as well be relieved by proper treatment as by extraction. Many physicians demand the extraction of teeth in such cases, which to my mind is bad practice. A duty you owe to your patients, is to get a better knowledge of this subject, and to see that they receive the best of care.

Cavities of decay should be treated in such a manner that the disease is arrested, and a recurrence prevented if possible. Aching teeth can be relieved in many ways; chloroform, carbolic acid, oil of cloves, etc., will do it if the pulp is alive; if dead, nothing but a vent for the pus or gas will do any good. Temporary stoppings of gutta percha, zinc phosphate, wax, or cotton and sandarach varnish can be put in by any of you.

Dental literature has made great progress in the last few years, and the aim is for a more scientific standard of excellence. The

monthly journals are giving all of the most advanced methods of practice; and it would be well for the general practitioner to take at least one.

The Code of Dental Ethics is very exacting, and you may say it is too much so; for example, it permits only the name, title and address on cards or signs. Every dentist who is a member of a dental society is required to subscribe to the Code of Ethics, as laid down by the American Medical Association, with the exception of some minor changes, where our special practice seemed to require it. You should be very careful as to the dentist you recommend to your patients. They should violate none of the rules, as given to you by the American Medical Association Code of Ethics.

Dental societies have done much to improve the practice of dentistry, and the future is such that no progressive dentist can afford to do without their aid; they are to some extent our post-graduate schools. The dentists intend to make the section on dental and oral surgery one of the best in the American Medical Association.

Microscopical research is being scientifically pursued by many dentists. Bodecker and Heitzman, Abbott, Sudduth, Miller, Black and Patrick are among the advanced teachers. *Oral surgery* is being practiced by many with success.

Implantation of teeth is an operation too new to be recommended without due consideration. Two years is the longest time any implanted teeth have been in the mouth, and seven per cent. of the total number implanted have been failures. A resorption of the root is always liable to take place, no matter how successful the case may appear. Still we hope for much and are not discouraged.

Artificial crowns have reached such a degree of perfection, that there is hardly a root so frail that one cannot be adjusted successfully, and they are the best substitutes for the natural teeth we have.

THE CURETTE IN OPERATIONS ON THE KIDNEY.

BY

I. N. DANFORTH,

A. M., M. D.,

Professor of Clinical Medicine in Chicago Medical College, and of Renal Diseases in the Woman's Medical College of Chicago.

Read to the Mississippi Valley Medical Association, at St. Louis, Sept. 26, 1888.

For some time past, I have been impressed with the opinion that the use of the blunt curette in operations upon the "cystic" or "surgical" kidney would be both proper and advantageous; but the surgeons to whom I have proposed this proceeding, have shaken their heads ominously, and uttered

the appalling word "hemorrhage." Nevertheless, from my knowledge of the architecture of the Surgical Kidney, as well as from the experience gained in several operations upon suppurating kidneys, I felt warranted in my opinion, and determined to put it to a practical test the first time that opportunity offered. That opportunity occurred a short time since. On the 8th of May, 1888, I was summoned to Galesburg, Illinois, by Hon. D. W. Aldrich, M. D., mayor of the city of Galesburg, and an eminent practitioner of medicine and surgery. Dr. Aldrich desired me to see a case of Pyo-nephrosis in consultation with him, with special reference to the question of operative interference. I found that I had little to do except to confirm Dr. Aldrich's diagnosis, and support his plan of treatment, which was immediate nephrotomy. Accordingly, on the afternoon of Tuesday, May 8, Dr. Aldrich performed the operation, assisted by Drs. J. T. Percy and J. T. Wilson, myself as "vis-vis;" the lumbar incision was selected and the kidney was reached and punctured without difficulty. Pus to the amount of about eight ounces was evacuated, and the cavity was irrigated until the irrigating solution returned "clear." I then requested Dr. Aldrich to allow me to explore and curette the cystic cavern, which he very courteously did. Upon digital exploration, I found the walls of a multiple abscess, or rather a series of

abscesses, the walls of which were formed by the inter-lobular connective tissue. I proceeded to break down these partition walls as far as I could safely, so as to leave one large cavity in place of many small ones, with the intention of insuring absolute freedom of drainage. The walls of these cavities were lined with the soft, velvety, "pyogenic membrane," which by the way, is not a membrane at all and is not "pyogenic." Then using the index finger as a guide, I carried a blunt ring curette to the fundus of each cavity, and gently scraped away the layer of conglutated exudate, which we have so long called the "pyogenic membrane," but which irrigation alone was not capable of dislodging. The operation gave me no difficulty and produced no hemorrhage, but I was greatly surprised as were the other medical gentlemen present, at the vast amount of flaky conglutated exudate which the curette brought away. After curetting as long and as thoroughly as I thought advisable for the first time, through irrigation with carbolyzed water was performed. I then inserted a drainage tube, and Dr. Aldrich closed the wound. The second irrigation washed away a surprising quantity of grayish flaky or softened exudate, which the curette had detached from the cyst walls. In the judgment of all of us who were present, the curetting promised to be of great advantage, with reference to the subsequent progress of the case.

The foregoing was written a few days after the operation, and now, August 5, nearly three months later, I complete the history of the case by saying that the patient's recovery was most satisfactory to us all, being as Dr. Aldrich writes, "complete in nine weeks" after the operation. No bad symptoms occurred; no long exhausting period of suppuration; no sudden perturbations of temperature; in fact, none of the complicating symptoms which are so likely to follow similar operations. The pus practically disappeared from the urine with-

in a few days after the operation, and did not return again and the patient's restoration to health was more rapid than had occurred in any similar case in my experience.

I claim that the process of curetting the surgical kidney is good practice for the following reasons:

First, it expedites the healing process. No amount or variety of irrigation can remove the fibrinous material which lies between the pus and the renal structure; yet it is not at all likely that the work of "granulation" begins, until this fibrinous layer, or "pyogenic membrane" has been removed. If we wait for this layer to "break down into pus," as we loosely express it, it subjects the patient to a long and exhausting stage of suppuration which interferes with, and prolongs the healing process.

Secondly, it lessens the danger of septicæmia. The removal at once of so much material, which, if left, must be cast off by the slow process of molecular disintegration, must certainly lessen the liability to septic infection. And this is certainly a strong argument in favor of the practice of curetting, as all practical surgeons will understand.

The "surgical kidney," as is well-known, is practically a multiple abscess, or perhaps more correctly, a collection of pus pockets which communicate with each other, generally by means of very inadequate openings. Each of these pus pockets is lined by its fibrinous layer, or "pyogenic membrane," which must be gotten rid of before reparative granulation can take place. The curette, in careful and capable hands, is capable of dislodging this useless material in fewer moments than it would take weeks by nature's unaided method, and the dangers of septicæmia are correspondingly diminished.

Thirdly, if the curette is employed, small calculi which might otherwise escape detection are likely to be found and removed, the metallic "click" at once giving notice that the curette has come in contact with a calcareous body. I regard this as an important point. All surgeons agree that

small calculi which are imprisoned in the smaller and deeper pus cavities, are likely to escape detection and removal. When this happens, recovery cannot take place; in fact, a urinary fistula is likely to result. But if the surgeon proceeds to explore any discoverable cavity with a blunt curette, with the purpose of evacuating its contents, he will almost certainly discover and dislodge calculi, which the finger could not reach or recognize. This alone is a strong argument in favor of the curette.

Fourthly, another argument in favor of any safe method by which decaying matter can at once be removed from the kidney, is the fact that such matter has a peculiarly disastrous effect upon the bladder, and if left to the slow process of disintegration a considerable portion of it must escape by the way of the bladder. In fact, I think the bladder experiences as much real relief from the use of the curette as the kidney itself. In the case I have related as the basis of this paper, the urine cleared up in a few days after the operation and remained clear; and what is more to the point, coincidentally with the disappearance of pyuria, came the disappearance of cystic irritation and tenesmus. This relief was prompt, decided and permanent. In my own operations, where the curette was not employed, pyuria disappeared slowly and cystic irritation was persistent, disappearing slowly, just as the pus disappeared. I think the removal of the degenerating material by the curette in the case related, clearly accounts for its more favorable progress.

How shall the operation of curetting be conducted?

First, a blunt or "dull" ring curette should be used; that is, an instrument without a cutting edge. With such an instrument there is practically no danger of wounding the kidney, or inducing hemorrhage. And this is the only valid objection to the use of the curette, while its advantages are beyond dispute. If, therefore, a proper instrument be employed, this objection vanishes at once.

EYE, EAR AND THROAT.

Secondly, after the kidney has been exposed and freely opened, and after the pent up pus has been removed by irrigation, the organ should be carefully and thoroughly explored with the finger; the cavities should be reduced to as few as possible, carefully tearing asunder the intervening walls which are generally broken down very easily. The curette should next be introduced upon the index finger, which is used as a guide; it should be made to penetrate each and every cavity, still under the intelligent guidance of the surgeon's finger, and the soft degenerating layer of exudative material which forms the floor of each abcess cavity, should be very gently, but no less thoroughly removed. An intelligent sense of touch is all that is necessary to avoid all danger of hemorrhage. In fact, the danger is imaginary rather than real. The soft and unorganized material which the curette dislodges contains no vessels; it is not "embryonic" or "granulation" tissue, but a dead blastema which must be thrown off in some manner. Hence I have no hesitation in repeating the assurance that the process of curetting the cavity of the surgical kidney, is practically devoid of danger, if it be done with a proper instrument and with ordinary surgical care and judgment.

Thirdly, after the suppurating cavities have apparently been thoroughly emptied of their contents, and the finger seems to reach firm and healthy tissue, let the irrigator be again employed until the detached exudation ceases to come away; then introduce the curette again and gently scrape the irregular walls once more. Repeat this process of alternately curetting and irrigating until the water from the irrigation returns comparatively clear, showing that the scraping has been thoroughly done.

Although the conclusions here advanced are based upon the experience gained in a single case, yet that case was a typical one in all respects, and I confidently expect to repeat that experience with equally favorable results when another opportunity offers.

FATAL MASTOID DISEASES.

BY

SETH S. BISHOP,

M. D.,

CHICAGO, ILL.

Read to the Mississippi Valley Medical Association at St. Louis, September 26, 1888.

After receiving two very kind invitations from your enterprising officers to attend this meeting and to contribute a paper, I began to cast about for something new to present in the world of truth, as you have

often done. I had neither the luck to happen upon it nor the genius to invent it, so I concluded to seize upon this opportunity to impress upon a representative body of general practitioners a most important lesson the last year has taught. It relates to the dangerous and fatal sequels of inflammation of the tympanic cavity.

Suppurative inflammation of the middle ear is so common a disease that too little importance is attached to it by medical men, as well as by the laity. Cases are of frequent occurrence in which patients have suffered an irreparable loss of hearing in consequence of being told that the discharge from the ear would stop if let alone. It would be possible to cite cases also where this advice has resulted in years of suffering from an offensive discharge and consequent deafness, caries and necrosis of the bone, facial paralysis, mastoid fistula, and even meningitis, pyaemia and death. It has always been a source of surprise to me how any physician could give his patient such advice, if he considered for a moment the close anatomical relations that exist between the diseased tympanum and the mastoid cells, the lateral sinus and the brain and its membranes. If an inflammation, once started in the mucous membrane lining the nose and pharynx, travels with the utmost ease and rapidity through the eustachian tube to the same membrane lining the tympanum, what is to prevent it from going a little farther and invading the con-

tiguous membrane that extends throughout the mastoid antrum and cells? Proper treatment may readily prevent it, but the power of nature often fails to limit the extension of an erysipilatous inflammation of the skin from one part of the body to another. In view of these facts the only charitable inference is, that when the family doctor advises the expectant or do-nothing course in a disease attended with such pernicious results and fatal possibilities, he does so without bestowing serious thought upon the character of the malady.

The following case will illustrate the truth I wish to emphasize:

W. B. an interesting boy of fourteen years, was brought to my clinic at the Illinois Eye and Ear Infirmary, by his mother on November 17, 1887. He had a chronic suppurative inflammation of the left middle ear. His parents had been advised that he would "out-grow" the "running ear" if they would "not meddle with it," but they finally came for consultation in consequence of pain which had recently developed in the region of the ear. Examination revealed, besides the tympanic disease, a slight swelling over the left mastoid process, accompanied with redness, tenderness and inconsiderable pain, all the symptoms of periostitis. They were not sufficiently pronounced to indicate treatment by leeches or Wild's incision, and I have often dissipated an apparently more violent inflammation in that locality by active and persistent counter-irritation and leeching. Indeed, while writing this account I have succeeded by this treatment alone in conquering a diffuse acute inflammation of the external meatus, the middle ear and mastoid periosteum, accompanied with exquisite pain and extraordinary swelling about the mastoid, the neck and the cheek. Therefore, as there were no signs of the presence of pus beneath the skin, or of a fistula, I advised the mother as to the possible bad termination of the disease, and requested her to bring the patient to the clinic daily in order

to prevent serious consequences, and, upon her promising this, I began the usual counter irritant treatment with the essential oil of mustard. I did not hear from the case again until the night of November 20, when I was summoned hastily to see a child believed to be dying in spasms. I found it to be the same boy. He lay unconscious in bed. The muscles of the left side of his face were twitching convulsively, distorting his countenance to such a degree as to make it hardly recognizable. The pupil of his left eye was dilated and not responsive to light. The flow of pus from the ear had ceased. Immediately I syringed the ear with warm water to re-establish the flow if possible, and relieve the apparently intracranial pressure. This failed. Without loss of time, even to take the temperature or pulse, I made a long incision down to the bone, over the most prominent part of the mastoid process, about one-fourth inch from the auricle. Pus gushed forth with the blood, and the convulsions decreased in intensity. I syringed the wound cavity, and had the satisfaction of seeing a speedy cessation of the spasms, and the restoration of the boy to consciousness.

There was sufficient presumptive evidence of secondary purulent inflammation of the mastoid cells and of a communication, with the cranial cavity to warrant an operation with the drill, and the family was so informed. But when I visited the patient in the morning he appeared so well and natural I could not command sufficient eloquence to convince the parents and friends that there was any serious occasion for operative interference. So I had to content myself with antiseptic and antiphlogistic treatment,* and giving free exit to the pus so as to prevent another intra-cranial accumulation, or pyaemia by means of an opening into the lateral sinus.

Under this treatment the boy's apparent progress was so deceptive as to his real condition that his family wondered why the doctor had suggested an operation, for he

seemed to be getting well. His appetite was excellent; his general functions unimpaired; his mind was clear; his desire to play returned, and he asked for his drum and gun and laid plans for a hunting trip. But his temperature during the week following Wilde's incision ranged between 99.6° F. and 101.6° , and his pulse averaged 80, not falling below that nor rising above 86. On the morning of the seventh day from my first visit, his temperature was normal and his pulse 80. In the evening his temperature had not varied, but his pulse had fallen to 60. The next morning his condition was unchanged, but in the evening his temperature had dropped to 97.8° . On the morning of the ninth day his temperature was 97.9° , his pulse had fallen to 52 and his respirations were 16. During the succeeding three days that I saw him, his temperature gradually arose as follows: 98.1° , 68.3° , 98.6° , and on the evening of the eleventh day, 98.7° . His pulse became feeble, and vacillated between 50 and 56, and his respirations between 14 and 18. From the time his temperature dropped below normal he began to be indifferent to food and friends. He objected to being disturbed, and complained more and more of pains in the left frontal and temporal regions. His pupils, not irregular at that time, responded sluggishly to light. His bowels became torpid, and he did not void urine. I evacuated the bladder daily with the catheter; employed tonic and supportive treatment; kept the ear and mastoid wound cleansed with antiseptic solutions, and repeatedly urged the necessity of an operation—the only hope left. I prepared to operate and engaged the assistance of another physician, but their horror of a surgical operation decided the parents against it, notwithstanding the fact that they had already seen their boy's life saved by a cut of the knife.

Finally I told the family that, since they had tied my hands by refusing the only superior medical art could offer, I could accom-

plish nothing more for their child, whereupon I was dismissed. On Friday, December 2, they called a competent obstetrician who counseled them to remove the child to a general hospital, where he died two days later.

To complete the history of this interesting but unfortunate case, I will append the hospital record, kindly supplied me by Dr. Scheuer, the intern who had charge of the boy after his admission:

Friday, 2 P. M.: temperature 99.2° F.; pulse 56, hard and irregular; entered in stupid condition; could be aroused; would answer in monosyllables; sometimes talked incoherently. His pupils were normal; his left eye closed; but he would open it occasionally. He passed a small amount of highly colored urine. Bowels had not moved for four or five days. Prescribed three-drop doses of tincture of aconite every three or four hours, and one-fourth grain of elaterium. Saturday, A. M.: Temperature 99.6° ; pulse hard and irregular; bowels moved four times in the morning; patient's mental condition unchanged; complains of pains in frontal region. At 5:30 had a convulsion; face blue, etc.; muscles on left side (of face) only affected, according to friends' statement. Pupils normal. Saturday P. M.: Pulse 68; temperature 99.3° . Aconite had been given during the day in three-drop doses. One sixth grain of morphine was given at 8 P. M.

During the night the friends who had been watching with the boy retired, and when they returned to his bedside at 6:30 Sunday morning they found him dead.

An important feature that should not be lost sight of was the sign of cerebral complication as evidenced by the condition of the patient's left eye. There was dilatation and sluggishness of the pupil and loss of power over the lid. I am not prepared to think this a unique case in respect to the eye symptoms, for they may have been overlooked by other observers; but in studying the literature of the subject, I have been

struck by the absence of any mention of these eye characteristics in nearly all of the fatal cases of which I have obtained reports. There was hardly any room for doubting the existence of meningitis and cerebral abscess, consecutive to the mastoid inflammation as indicated first, by the great amount of frontal and temporal pain; and second, by the convulsions, partial paralysis, dilatation and sluggishness of the pupil, the feeble, slow pulse and respirations, low temperature, etc., but no autopsy was had.

This melancholy case teaches a lesson to the laity as well as to the profession. It illustrates the helplessness of the surgeon when disarmed by the patient's friends in the face of the patient's mortal enemy. The needless loss of the life of a promising boy who had safely weathered that period of life which is beset by a formidable array of childrens' diseases, is the more lamentable in a country that opens a thousand avenues to wealth and honor and fame, from the frontier hamlet to the White House at Washington. One beautiful life saved by the doctor may mean a world of possibilities to the individual, to a family and to a generation. Yet it is a grave question whether a surgeon, opposed by the chimerical prejudices of the mistaken friends of the patient, may open the skull to save a life. In private practice he can not; in hospital practice I hold that he can. This excludes the question of pay patients in public institutions. In private patients an unfortunate termination of a disease after an operation performed under the protests of a family might expose the operator to interminable trouble, denunciations, and expensive litigation, whereas, in hospital cases there is an invulnerable support of chosen counsellors and able assistants with common cause.

In the case cited the strength of the opposition to operative treatment may be imagined, when it is known that at the time I had just issued a report of seven similar cases I had treated during the preceding year with uniformly successful results of the

operations. In fact I had never been so unfortunate as to have had a fatal termination after the operation up to that time. I have had one since, but in that case death was a foregone conclusion, for pyaemia had occurred sometime before the operation by means of a direct communication between the mastoid cells and the lateral sinus, as the autopsy revealed. It is a serious question whether, under such unpromising conditions, the operation should be resorted to as affecting the reputation of both the operation and the operator; but in view of the fatality of the disease, and of the strong probabilities of a cure, I advocate the operation whenever there is a ray of hope.

AMERICAN
ASSOCIATION
OF OBSTETRICIANS
AND GYNECOLOGISTS.

This young and vigorous association has been universally popular with the medical profession of the country, and the medical press in all sections has said many pretty things about the *personnel* of its members, and about the excellence of the scientific work at the recent meeting in Washington. The members need no introduction to the medical profession, for most of them are well and favorably known at home and abroad.

The unfriendly attitude of the American Gynecological Society to the American Medical Association and to the meeting of the Ninth International Medical Congress has very much impaired its usefulness as a national association. Its membership is confined mainly to the east.

The Association of Obstetricians and Gynecologists is national and decidedly American, and its members are deeply in earnest in an effort to contribute to the success of the American Medical Association. This association of specialists has won and it deserves the confidence and the support of the medical profession of the entire country.

H.

OPHTHAL-
MOSCOPY AND
THE GRADING
OF LENSES, ETC.

BY

J. HERBERT CLAIBORNE, JR.

M. D.

A reply to a Review notice
in PROGRESS, Oct. 1888.

In the October issue of PROGRESS is contained what is intended as a critique on the manual entitled "The Theory and Practice of the Ophthalmoscope." The notice occupies three columns of the journal. At the first blush one would be inclined to think that the merits and demerits of the book had been thoroughly discussed; it only needs, however, a second glance to reveal the fact that the subject matter of the book has been only lightly touched on and that the greater part of the space has been devoted by the critic to the ventilation of his own ideas, the asking of irrelevant questions and finally to a personal reference. The critic takes the author to task for following the "inch system" in the numbering of lenses.

The thing was not done in a corner, it is true, when the International Congress of Ophthalmologists decreed that the metrical system of measuring lenses be adopted over the world. This latter system is taught everywhere; but it is not taught nor used to the exclusion of the "inch system." The majority of the trial cases and ophthalmoscopes have the valuations of glasses in both dioptries and inches. No man in teaching, therefore, should exclude the "inch system." Indeed to the majority of students this system seems to be more comprehensible (though it cannot be said that either presents great difficulties).

After quoting at some length the author's words on the subject of the "inch system," the critic asks what is the need of using fractions at all if this system be relied upon? Surely the fractional expression is used solely to indicate the relative strength of lenses. In the sentences following this sentence any one who is familiar with the transactions of the International Medical Congress, held in

Washington in September, 1887, will recognize the echoes of a plea made by the critic on "The Necessity of Reform in the Manner of Designating Lenses." Without going at length into a critique of his paper, suffice it to say he advocated measuring lenses by their radius of curvature, from a unit of 90° or the quadrant of a circle. The paper was permeated by a minute description of Prof Snellin's instrument for determining the value and quality of a lens. Considerable discussion was elicited by the original character of the paper; the discussion was participated in by a number of surgeons; eminently Landolt, Cross, Burnett and others. There was not a single surgeon, according to reports, who advocated this original system.

Dr. Landolt found that the radius of curvature, while accurate as a unit of measurement, was not satisfactory, as there might be differences in composition and refractive power in lenses with the same radius of curvature.

Dr. Burnett thought that the plan lacked simplicity.

Mr. Cross thought that the plan was based on scientific accuracy, but that, "as a reformer," the essayist should not expect to succeed till he could give us a medium which was as accurate as his quadrant. This gentleman was of the opinion that the essayist's method was as bad as going back to the inch system. Finally Mr. Cross asked the essayist what the focal length of his unit of measurement was, and received the reply that it was *something less than an inch*. While the writer is strongly inclined to favor the minority as a general matter, on the ground of chivalry, in scientific matters he deems it better to acknowledge the arbitrament of reason and testimony.

The essayist's proposed system failed to commend itself even to those surgeons who had the exceptional advantage of hearing its distinguished author elucidate it. Moreover, the essayist, on being questioned as to the focal length of his proposed unit of

measurement, stated that it would be *something less than an inch*. This system of numbering lenses may be satisfactory to him who proposes it, but it is apparently not satisfactory to others, whom the scientific world considers good authority. In view of these things, and especially in view of the fact that the system offers us a unit whose focal length is more indefinite than that of the inch system even, the writer declines to teach it or to follow it, and will go as far as Mr. Cross, who thinks it as bad as the old inch system.

The next reference to the text is contained in the following quotation:

"In this country glasses are usually recorded in the form of vulgar fractions. In England and on the Continent the French system of dioptrics or dioptries. One dioptry is the equivalent of $\frac{1}{36}$ or $\frac{1}{40}$, accordingly as the French or English inch is taken as the standard." This is followed by the comment that the above quotation will hardly be satisfactory to the student "since it is neither clear nor accurate." The writer admits the justice of this criticism upon the above citation, for the critic has adorned it with his own punctuation and has amputated the verb of one of the sentences. If he have any reference to the statement that glasses are usually recorded in this country in the form of vulgar fractions, the writer can only say that that is his impression. The absolute disapproval of the statement can be made only by an acquaintance with the custom of all American ophthalmologists in this particular. If the statement be not clear or not accurate in other respects, its obscurity or inaccuracy is not remedied by the succeeding remarks, for they are devoted to telling us that the metrical system of grading lenses is an attempt at a more scientific method of measuring focal lengths than that employed in the inch system, and are closed with the statement that "one *dioptre* in the metrical system represents a lens of one metre focal length, twenty dioptries corresponding to the twentieth part of

one dioptre in focal length, one-half dioptre corresponding to two metres of focal length, and so on."

While the statements contained in these words are mathematically correct, the information is stale and the giving of it is a work of supererogation. On page 74 the author of the manual wrote "sulphate of atropia;" this expression occurs twice in last chapter; atropine sulphate, atropine, homatropine, etc., occur frequently throughout the text.

Atropia is a Latin word and cannot occur properly in the above manner. The critic cites the author as saying "a one per cent. solution of the sulphate of atropia is made by dissolving five grains of the salt in an ounce of water." The writer has looked in vain for these words, and he is forced to conclude that they do not exist except as the creation of the critic's pen. Nevertheless, in speaking of a one per cent. solution of atropine sulphate, the author wrote grs.v- $\bar{3}$ i, immediately following the expression one per cent. He therefore subscribes in general terms to the opinion that these proportions are sufficiently accurate for practical purposes. There are 455.6944 grains in an ounce of water; 4.55 grains of atropine sulphate dissolved in an ounce of water is a one per cent. solution of the salt. There are many practical, and at the same time scientific men who use the proportions grs.v- $\bar{3}$ i to represent a one per cent. solution. The critic says "it is notoriously true that the old standard solution of four grains of atropine to the ounce of water generally produced toxic effects in adults, if the instillation were repeated as often as once in six hours. Very few adults indeed can stand the instillation of the author's 'one per cent.' solution more frequently than three times in the course of the day." The writer ventures to believe that the above opinions are held by the critic alone. When the critic says that the instillation into the eye of the standard solution of four grains of atropine to the ounce of water cannot

be borne by an adult more frequently than once every six hours, without toxic effects being experienced, we are forced to admit that either his patients are very sensitive to atropine or he himself possesses remarkable powers of observation.

In conclusion the writer desires to say that this letter has been written in the same spirit of charity and comity which the critic states has actuated his review.

It may be possible some injustice was inadvertently done Dr. Claiborne, in the criticism to which he takes exception. The readers of PROGRESS are presumed to decide the question. As English, French, and Prussian inches are all different, the term "inch system" is exceedingly unfortunate. There can be little doubt of Dr. Claiborne's desire to teach the "inch system," whatever that may mean. For the dull powers of comprehension of this student his so-called "inch system" is no system at all. It is an attempt to measure focal lengths of lenses without reference to their symmetry, and without the designation of either of the inches employed by three of the great nations of the earth, no two of the three agreeing. What Dr. Claiborne calls the relative strength of lenses, refers evidently to their refraction, and this he determines in the first place by their radii. In any system of optics it is necessary to consider the distance between two definite points in order to establish a definite angle of separation in the lines beginning at one point and terminating at the other. It is highly probable the author of the paper read to the Ninth International Congress failed to convince that body of "*the necessity for reform in the manner of designating lenses*," but it is not true that "he advocated the measuring of lenses by their radius of curvature from a unit of 90° of the quadrant of a circle." A circle geometrically considered must be represented in extent by a line passing in that manner from a point to the same point. Now, it would be quite absurd to talk

about the quadrant of a circle as a unit of refraction.

A sphere is a globular body, capable of hetoretical division into smaller bodies; and so a sphere being taken as the basis of determining the maximum angle of refraction, it became evident to Vitellio that the material of which the sphere was constructed should have the greatest possible transparency. By actual experiment he determined that a sphere of crown glass would collect the rays of the sun, falling upon one-fourth of its surface and unite them almost exactly at the center of the sphere. It was he, therefore, and not the author of the paper read at the International Congress, who established 90° as the maximum angle of refraction; and subsequently Roger Bacon suggested this angle as a unit for division into less powerful refracting spheres or segments of the sphere as employed by Vitellio.

The quadrant of a circle eight inches in extent would represent a line two inches long. Just what relation this could have to the measuring of lenses, the editor of PROGRESS is not able to understand; and, allowing that the essay was just exactly as Dr. Claiborne represents, and even more so, for that matter, is it possible to establish justification in that manner for Dr. Claiborne's own deficiencies? That he may have full justice done his work, which he says was "written to present in a clear and brief manner the main facts in ophthalmoscopy and the method of using the ophthalmoscope," his fourth chapter is presented in full. The title of his book is, the "Theory and Practice of the Ophthalmoscope, a Hand-book for Students, etc."

One naturally would be inclined to suppose a work with this title should contain a description of the different forms of the ophthalmoscope in common use. Such, however, are doomed to disappointment, as the instrument displayed in the text seems to be the only instrument known to the author, and it is certainly not the form of ophthalmoscope in most general use.

"*Chapter IV:* The ophthalmoscope consists of a plane or a concave mirror (when concave, usually of nine inches focal distance), embedded in a metal plate. By means of this mirror, the rays of light are reflected from the source of illumination into the eye. The mirror is pierced centrally by an aperture through which the observer looks. Behind the mirror are arranged glasses, convex and concave, which can be thrown over the aperture by a ratchet. The whole is mounted upon a handle. Two biconvex lenses are usually placed in the case; they may have a focal distance of 2, $2\frac{1}{2}$ or 3 inches.

"The rotating glasses should preferably be covered, in order to protect them from injury or dust. The mirror may be either tilting or stationary—here personal preference would seem to be the guide. The tilting mirror is made in the shape of a parallelogram; the area of illumination in the fundus, of course, corresponds to the shape of the mirror. The stationary mirror is usually round, at times in the shape of a parallelogram, or a circle with a section lopped off laterally. The convex glasses are arranged on one side of the aperture, the concave on the other. The numbering of the former is usually in white, that of the latter in red. Under each glass the value in inches and dioptries is placed. In some instruments $\frac{1}{40}$ is taken as the value of 1 D., in others $\frac{1}{36}$. An ophthalmoscope that contains 10 or 12 spherical glasses on either side of the aperture furnishes sufficient means for correct diagnosis.

"The accompanying cut shows the 'Poly clinic Ophthalmoscope,' which we are accustomed to use. We would suggest to the beginner the propriety of obtaining as simple an instrument as possible, within the limitations set above. We have, not infrequently seen a student thoroughly discouraged by the inability to manage a complicated instrument.

"The older instruments, Liebreich's for instance, are not advisable."

The late Dr. Loring, of New York,

through the Appletons, published a textbook on Ophthalmoscopy, in 1886. The first part of it alone appeared. It treated of the normal eye, determination of refraction, diseases of the media, physical optics, and the theory of the ophthalmoscope. Speaking of the metrical system Dr. Loring says: "The metre is taken as the unit, and each metre is called a dioptré, or as it is usually written, 1 D. As the French metre is equal to 37 inches, 1 D. equals $\frac{1}{37}$ expressed in the old style." Dr. Claiborne says (page 12): "The dioptré is equivalent to $\frac{1}{36}$ or $\frac{1}{40}$ according as the French or English inch is taken as the standard."

Prof. Landolt, in his *Manual of Examination of the Eyes*, presented, at page 87, a table in which he represented the equivalent of one dioptré to be 37 Paris inches with a focal length of 39.5 in English inches.

A table in Prof. Snellen's book of test types, represents the dioptré as having a focal length of 37 Paris inches.

In the preface of Dr. Hermann Scheffler's book on *Ocular Defects, and Spectacles*, Prof. Carter, the translator, says: "It is well known that much dissatisfaction has been felt with the irregular intervals between the test-cases commonly sold, and that great confusion has been produced by the varieties of the so-called inches in which focal lengths have been expressed."

At the International Ophthalmological Congress, held at Paris in 1867, a committee was appointed to investigate these questions. This committee reported in favor of a metrical scale of focal lengths, having an interval equal to a lens of 240 centimetres focal length, just as Dr. Carter predicted it would do. Does the report of that committee settle the whole question? If so, the metrical system of grading lenses should alone be taught.

Have we in fact, a scientific system for grading lenses, and, if so, is it not unquestionably Kepler's system of dividing the quadrant, as suggested by Vitellio? Is that not a scientific and truly systematic method,

seeing it is projected upon a methodical division of the angles of the radii in the several representations of the quadrant in the whole series of refracting bodies?

What the unfortunate essayist at the Ninth International Congress suggested was, that we should either return to the old astronomical system of refractions, or we should have lenses graded by the angle of refraction only; and, it may be the readers of PROGRESS know that, it is by repeating the statement of a truth that it shall become implanted in the minds of men.

The teacher above all others should exhibit his familiarity with the subject he proposes to teach. If Dr. Claiborne has done so in his book, he is unfortunate in calling it "The Theory and Practice of the Ophthalmoscope."

Fowler & Co., of Chicago, are now engaged in the construction of a series of lenses graded by the angle of refraction, and it is hoped Dr. Claiborne will soon possess himself of a set of these scientifically graded lenses; if not for use in his practice, at least for purposes of comparison with those which he already has, and which he says are graded by the "inch system." Which "inch system" we have only to conjecture. Possibly the French, possibly the Prussian, possibly the English.

THE PHYSICIAN'S VISITING LIST.

(Lindsey & Blakiston's) for 1889. P. Blakiston, Son Co., 1012 Walnut St., Philadelphia, Pa.

This visiting list has made its thirty-eighth annual appearance in more handsome and durable form than ever before. It is

bound in good leather with gilt edges, and in size is the most compact of all the lists published. It is easily worn in the coat pocket without monopolizing all one's pocket space. The table of Poisons and Antidotes, Dose Table and List of New Remedies, together with other important details of daily practical need, have been revised and brought up to date. It is a model of elegance and convenience, and will maintain the popularity it has so long enjoyed.

OBSTETRICS AND GYNÆCOLOGY.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Reported by

J. M. BALDY,

M. D.,

Secretary.

Thursday, Oct. 14, 1888.

Dr. T. M. Drysdale in the chair. Dr. Joseph Price reported the following recent work in abdominal surgery:

Removal of appendages for chronic salpingitis with occluded tubes and ad-

herent ovaries, one side; 1.

Both sides, 7.

With double ovarian cystoma, 3, and with hydrosalpinx, 1.

For uterine myoma, 1.

For uterine Fibroma, 2.

For double pyosalpinx, 2.

With purulent peritonitis, 13.

With ovarian abscess on one side, 1.

With peritonitis and double ovarian cystoma, 2.

One-sided pyosalpinx, 6.

With post puerperal peritonitis, 1.

With ovarian abscess, same side, 1.

With ovarian abscess on opposite side, 1.

With ovarian cyst, one side, 1.

With suppurating ovarian cyst and broad ligament cyst, 1.

For double hydrosalpinx, 1.

For hydrosalpinx one side, with ovarian cyst, 1.

With ovarian and broad ligament cyst, 1.

For double dermoid cyst with general peritonitis, 1.

For dermoid cyst of one side, with suppurative and purulent peritonitis, 1.

With cyst on other side, 1.

For ovarian cyst, simple, 6.

With salpingitis, 1.

For double ovarian cystoma with double salpingitis, 1.

With fibroid uterus, 1.

For extra uterine pregnancy, 4.

With cyst on opposite side, 2.

With double abscess of one ovary and colloid cyst of other, 1.

For miliary tuberculosis of appendages, 1.
 For ruptured papillomatous ovarian cysts, 1.

For hysterectomy, for fibroid uterus, 1.
 For sarcoma of uterus and intestines, 3.
 Exploration and drainage, 2.
 Resection of bowel for carcinoma of intestine and abdominal walls, 1.

Obstruction of the bowels, 3.
 Sarcoma of spleen, 1.
 Pelvic abscess, 1.
 Post puerperal peritonitis, with removal of omentum, 2.

Perforating typhoid ulcer, 1.
 Ventric hernia, 1.

Total, 65.

Mortality: One death. Double pyosalpinx with double ovarian cyst and purulent peritonitis. Autopsy showed pyonephritis; 7 days.

One death. Extra uterine pregnancy. Moribund, 36 hours; before operation, 24 hours.

One death. Supra-vaginal hysterectomy for sarcoma of uterus and all abdominal viscera, 4 days.

One death. Resection; twenty inches of large and small intestine for carcinoma. Hopeless, 26 hours.

One death. Exploration and drainage. Large multilocular cyst R. ovary, general malignancy, parent cyst evacuated, hopeless, operation for temporary relief, 4 days.

One death. Perforating typhoid ulcer; evacuation of large quantity of muddy fluid and lymph; reacted well for 12 hours; 36 hours.

One death. Hysterectomy for sarcoma of uterus and L. ovary; bowel involved, third day.

One death. Strangulation of ileum. Released adhesions; recurring attack of collapse for three days before operation; hopeless, 25 hours.

Total deaths, 8.

The mortality list gives a small group of those hopeless cases we are called upon to give some relief. In short, they simply com-

mand you to do something for relief. If there is one chance they demand it. As a rule they have been seen by one or many physicians and have refused any early operative interference, or delay has been advised. We find in such cases just those pathological conditions that should at least induce us to recommend, nay more, to insist and urge the removal of all such murderous diseases. If all operators and practitioners recognized the importance of early operation in these and analogous conditions as they do in strangulated hernia, the mortality would be greatly reduced and a world of suffering saved. Early interference in ovarian cystoma is generally taught now. The importance of the early removal of the appendages in fibroid and myomatous uteri has not received that attention it deserves. The tubes and ovaries are diseased in a majority of these cases and much of the suffering is due to their pathological condition. The mortality and the suffering in pelvic inflammations, the segnallae of gonorrhœa, are very great and the country is covered with neglected cases. If cases carrying typical large pus tubes in this city were distributed, there would be at least one in every street, alley and court. In my experience with small tumors in young women, I have been convinced of the propriety of early removal on account of accidents incident to their development and growth. Many are dermoids and prone to strangulation and suppuration, recurring attacks of localized peritonitis complicating their condition.

I have been called to operate upon at least six of these young ladies in bed, emaciated, with quick pulse and high temperature; the general condition bad, for so serious an operation as abdominal section. If these operations are done early, while the patient is in fair condition, every risk of the operation is minimized—short anaesthesia, short incision, rapid enucleation, secure ligaturing, thorough irrigation and good drainage, the mortality will be very low and

the much complicated and desperate cases rare.

Dr. J. M. Baldy thought that such an opportunity as was now presented by one of the cases presented by Dr. Price should not be neglected, and that he would say a word about early operation in cases of tubal disease. A great deal of condemnation had been expressed of these operations on the ground, that very little trouble was likely, to arise subsequently. The case referred to had been under the care of Dr. Duland, and that he had had the pleasure of examining the post mortem specimens with the doctor. The specimens, together with the clinical history, set the subject forward in a very vivid way. The history of the case was from the beginning one of tubal inflammatory trouble. Seven years before her last illness she had fallen into the hands of one of the oldest and best known gynæcologists in the city, but one who is not an operator. Dilatation and other well known methods of treatment were persisted in for months. Her real condition was evidently not recognized. She went on from bad to worse and finally in her last illness fell into the hands of Dr. Duland. She fell into collapse three times during this sickness, and operation was urged both by her attendant and the consulting surgeon; their hands were, however, tied by the consulting physicians. At the last moment an operation was agreed to, but the patient died. The specimens and autopsy showed double pyosalpinx, with both ends of both tubes impervious. Intestines were bound down in a mass on the tubes and strangulation had occurred. Such a condition of affairs should not have been overlooked by any one, and an operation was strongly indicated. The case operated on any time during those seven years would have been saved with little risk. The case ran a course quite common, and which can only be prevented by early operation. In answer to a question from Dr. Da Costa as to how he knew there had been this condition seven years ago, he said that the woman

had suffered continually with the same symptoms from the first. That she had either had the same condition then or it had been aggravated from a mild to a severe form of the disease by the treatment she had received.

Dr. Wm Goodell could corroborate the statement that the appendages were diseased in fibroid tumor. The larger the tumor the more likely are the ovaries and tubes to be diseased and the harder to remove. He was not sure but that in young women where the tumor was growing rapidly, it would not be better to remove the appendages early. Some years ago he had thought that dermoid tumors were solitary, but that two years ago he had removed a dermoid from each side and had since noticed in the literature a number of others reported.

Dr. M. Price said that the delay in treatment of many of these cases was due to the erroneous teaching in regard to inflammatory pelvic troubles. His belief was firmly fixed that they began as tubal trouble. In such cases leakage took place and set up other inflammatory trouble. He had been called in consultation to a case recently which was being treated as cellulitis as usual. The patient had been an invalid for years; had been blistered, etc. The attack was relieved temporarily, but had subsequently returned and she was now in a bad septic condition. The tubes contain pus and the woman will either die or be relieved by an operation. Her attending physician is a good man, but he has been taught that every trouble in the pelvis of an inflammatory character was cellulitis.

Dr. Hoffman had lately come across a patient with fibroid tumor, who had been operated on three years before, but whose appendages had not been removed. She had great pain and in one of our large institutions her trouble had been pronounced uterine neuralgia. The operation revealed the colon adherent throughout almost its whole extent. Both appendages were diseased and plead absolutely to dig them out.

These difficulties probably caused the former operator to stop and he would not have overcome them had it not been for the kind aid of Dr. Price.

Dr. Theophilus Parvin exhibited a specimen of extra-uterine pregnancy, removed by Mr. Fait, in the latter part of August. Pregnancy was supposed to have advanced six or seven weeks. Rupture had taken place two days before the operation. The patient was doing well when he last heard of her condition, four days after the operation. He thought that Mr. Fait was really the most wonderfully expert abdominal surgeon he had ever seen. In his works no antiseptics are used; perfect cleansing of the hands with soap, water, brush and towel; perfect cleansing of the abdomen; incision through the skin and underlying tissues; hæmostatic forceps used if necessary, but frequently not required; the use of forceps to take up the tissues as the peritoneum is approached; the raising up of the peritoneum almost an inch so that there is no risk of injuring anything beneath the membrane; incision into the peritoneum; the moment the incision is made the introduction of one or two fingers or rather the index finger and the thumb. In their case the diagnosis was not positive, only possible, before opening the abdomen, but as soon as he had introduced his fingers into the abdominal cavity, he said that it was a case of extra-uterine pregnancy with rupture of the tube. It took probably five minutes to bring up the ruptured cyst and ligate the tube with the Staffordshire knot. After removing the tube and ovary, water was poured in through a funnel to which was attached a rubber tube with a nozzle. The metal nozzle was pushed around in all parts of the the abdomen so as to wash out all of the clots.

In this particular case two pitchersful of water were used, a drainage tube was introduced and three stitches closed the abdominal incision. This patient did not have a temperature above 100° , and when seen

three days later her recovery seemed almost absolutely certain.

Dr. Parvin also exhibited the following instruments:

The axis traction forceps of Dr. Stephenson, Professor of Obstetrics in the University of Aberdeen. The forceps closely resembled the Simpson, being only a little longer and the pelvic curve greater. The traction is hooked on in front of the lock after the forceps are applied.

Delore's flexible blunt hook.

Pajot's curette for removing the remains of a miscarriage, consisting of a curette, the curve of which may be altered while the instrument is within the cavity of the uterus and to which different sized extremities may be attached.

Doléri's *ecouvillon* for brushing out the cavity of the uterus after incomplete abortion. Before introducing the instrument it is dipped in an antiseptic solution. To this treatment the inventor has given the name of *ecouvillonnage*. Sometimes the use of the curette precedes that of the *ecouvillon*.

Mathien's instrument for washing out the uterus, consisting of two tubes lying closely together with small openings on their approximated surfaces. After introduction into the uterus the two tubes are separated by means of a screw, leaving a space for the water to flow from the uterus.

Dr. William Goodell thought that after seeing Stephenson's forceps he could justly lay claim to all priority in the axis-traction device. Many years ago in his work at the Preston Retreat he found that his back so often gave out while making axis-traction with his left foot on the ordinary forceps, that he sewed a stirrup to the end of a leather strap. The other end of the strap he wound around the forcep's handles near the lock, and in the stirrup he placed his foot. He usually hung the strap so near the floor that his heel rested on the latter, the traction force being made merely with the toes or ball of the foot. He thought

Dr. Price had probably seen this impromptu device hanging on a gas fixture in the lying-in room of the Retreat. Of course the woman lay on her back with her nates drawn over the edge of the bed.

Dr. Price remarked that he had seen the device spoken of by Dr. Goodell.

Dr. B. F. Baer read the following report of two cases of multilocular ovarian cystoma of unusual size and very rapid growth:

Mrs. T. was sent me by Dr. J. A. Clark, of Bedford, Pa., and on July 31st, entered my private hospital. She is aet. twenty-eight years; married; has had two children after normal labors, the youngest being six years of age. About nine months previous to this date she was attacked with severe pain in the right ovarian region and was confined to bed for several weeks. Her menses had always been regular, but at this time the flow was profuse and continued two weeks. Soon after this attack of pain and metorrhagia, she noticed a swelling in the painful region on the right side. She rapidly increased in size and began to lose flesh and occasionally to have attacks of pain and metorrhagia similar to the one noted above, the flow for several occasions lasting for a month. Her abdomen was enormously distended, especially in the upper portion. It was rather symmetrical, dull on percussion all over the interior and lateral portion except in the lumbar regions where slight resonance was observed. There was fluctuation in the lower part, but in the upper portion it was very obscure. The skin on the lower surface of the abdomen was in a condition of elephantiasis.

Vaginal examination revealed the uterus slightly retroverted, rather mobile, and gave a sound measurement of three inches. The lower surface of the tumor could just be felt by the vaginal examination. The patient had a very weak pulse, indeed it could not be felt at all at the left wrist, and she had great dyspnoea on the slightest exertion.

Operation was performed on August 2d. I was assisted by Drs. J. C. Bowen, G. H.

Franklin, J. A. Clark and H. C. Bloom. An incision three inches in length was made in the usual position. The skin at the point of the incision was fully half an inch thick and very vascular and considerable subcutaneous adipose tissue was present. As soon as the tumor was reached it presented the appearance common to ovarian growths, but it was found to be closely adherent to the abdominal wall. After separating as far as the finger would reach, the tumor was punctured with Falt's large trocar, and about four gallons of greenish fluid drained away; but only the lower portion of the tumor collapsed, the greater and upper portion remained as before. This was punctured in a number of places without removing the instrument from the cavity which had been drained, but nothing followed. The opening in the tumor was now enlarged and the hand introduced and the multilocular condition broken down, large pieces of semi-solid substance being torn loose from the cavity of the tumor and brought away, together with a great deal of semi-fluid debris. As soon as room was gained the hand was carried outside the tumor, when it was found to be adherent to the liver, stomach and everything with which it came in contact. These adhesions were carefully separated, and after considerable effort the remainder of the tumor was finally brought out through the incision, which had been previously increased to $3\frac{1}{2}$ inches. The pedicle, which was found to be thick and vascular, was transfixed and ligated and the tumor cut away. The irrigating tube was carried in every direction until the water returned clear. The right ovary was not removed, it being in apparent health. The wound was closed around a drainage tube. There was considerable shock. The pulse could not be felt at either wrist and it was two days before it returned, although the patient seemed to be doing well. The usual aftertreatment was carried out and the patient has made an excellent recovery. She went home (250 miles) on the twenty-

seventh day and still remains in good health. The temperature never rose above 100° , and the drainage tube was removed on the second day. The tumor was a multilocular cyst and weighed about ninety pounds.

On September 5, I was asked by my friend Dr. R. Armstrong, of Lock Haven, to meet him in consultation in a case of abdominal tumor, which he stated was in such extreme condition that he feared she might not live until my arrival.

I saw the patient on September 6th. She is twenty-one years old and single; puberty occurred at twelve and menstruation had always been profuse, coming on every three weeks and always attended with some pain. She did not consider this abnormal, and so far as she knew was perfectly well up to four months previous to the above date. In the latter part of April of this year, after unusual exertion about the house, she was suddenly attacked with severe cramp-like pain in the R. iliac region, so severe indeed as to alarm the neighbors by her outcries. This attack occurred about the time of her expected menstruation and continued until the flow followed, when she gained considerable relief. But she remained ill from that time, being able to go about however, in the intervals between the series of attacks of pain of similar character which now followed. Within two weeks after the first attack she noticed that her abdomen was increasing in size in the painful region, and from that time to the present, just four months, her abdomen had grown to an enormous size. I found her occupying a semi-recumbent posture and breathing with difficulty. She was emaciated to such a degree and the tumor was of such size that she was almost hidden from view beneath it. The surface of the abdomen was purple from interference with the capillary circulation and the veins were greatly distended. The abdomen was symmetrical and smooth. Fluctuation was rather obscure. There was dullness on percussion all over the anterior and lateral surfaces of the tumor, except at

a point far back in the left lumbar region, where slight resonance was found. On the upper right border of the tumor in the region of the liver, there was an apparently solid mass, shaped somewhat like the liver, suggesting the possibility that the cyst had grown from that organ. This was given more prominence on account of the rapidity of the growth. The patient was unable to retain anything on her stomach and she had not slept except at short intervals for weeks. Her bowels were constipated and the urine was passed frequently and in small quantities. Her pulse was 140 and very feeble. Her expression was an appealing one and she begged to be relieved.

A tablespoonful of whisky was given and repeated in two hours, just before the administration of the anæsthetic. I was ably assisted in the operation by Drs. Armstrong, Ball and Watson, of Lock Haven. An incision two inches in length was made. The surface of the cyst was adherent to the peritoneum. After separating the adhesions as far as I could I plunged a large trocar into the tumor. But the contents were semi-solid; I therefore cut through the cyst wall and proceeded to break up and remove the contents. The cyst was adherent to everything it touched, liver, stomach and other viscera, but the adhesions were weak and in ten minutes time the tumor was removed and the pedicle, which was thick and vascular, was ligated. The omentum was so firmly adherent to the cyst that it was ligated and amputated. The friable cyst wall was ruptured in many places and a great deal of the viscid semi-fluid material escaped into the abdominal cavity, but I did not lose time in trying to prevent this. When the tumor was removed what was left of the patient was an exceedingly small portion. The emaciated abdominal walls lay close to the spinal column and sunk into the pelvis. She looked more literally "nothing but skin and bones" than anything I had ever seen before. The abdominal cavity was thoroughly washed out by

irrigation through a fountain syringe, and I was careful to press the nozzle high up among the intestines and under the surface of the liver and diaphragm. The water returned clear and the incision was closed around a drainage tube and the patient returned to bed with a better condition of pulse and appearance than she had been before the operation. She did not show any evidence of shock and was conscious almost as soon as she was placed in bed. Her body was so emaciated that it was necessary to pack with cotton about the pelvis and along the spinal column as the bones almost projected through the skin, and at several places bed-sores were apparent. The right ovary seemed smaller even than its natural size and appeared healthy; it was therefore not removed. The after-history of the case has been without event. Her temperature never rose above 100° , but was normal on the third day after the operation. The pulse gradually diminished from 140 and was normal on the fifth day. The drainage tube was removed within thirty-six hours after operation. The sutures were removed on the eighth day when union was found complete, except at the lower portion where the drainage tube had been and this has since healed. She began taking solid food on the third day and on the fourth day her bowels were moved. The tumor weighed about seventy-five pounds.

The points of considerable interest in these cases are the location, character and severity of the early symptoms, as well as the location of the tumor when first noticed (on the right side), while the tumors were of the left ovary, the right being perfectly healthy; the large size and very rapid growth of the tumors; the rapid recovery of the patients although in extreme condition, especially of the case just mentioned; the fact that the two cases are alike in nearly all particulars, the only difference being that in the second case the rapidity of the development was much greater, and the severity of the symptoms likewise greater; and

lastly, the method of removal of the tumor; that is, the breaking up of the semi-solid contents with the hand, thereby permitting their removal through a very short incision. I wish here to especially call attention to a fatal case which occurred in my practice several months ago, and which forcibly illustrates that there may be danger in introducing the hand for the purpose of breaking down contents of the tumor, not knowing exactly the location of the intestines. In the case referred to the friable wall of the main cyst had ruptured and some coils of intestine were found to be in the cavity and closely adherent to the more solid portion of the contents. Very careful manipulation was necessary to separate the bowel which was finally done after considerable time had been spent in the effort. Ordinarily, however, where the cyst has not previously ruptured the procedure is a safe one where this case is observed.

Dr. M. Price reported a case of pyosalpinx with rupture.

On the 6th of September I was called to Mrs. —, with symptoms of miscarriage, with pains, hæmorrhage and slight odor to the discharge. She refused to have an examination, saying she knew she was not pregnant. I left her with the understanding that when she was ready for me to examine her to send for me. On September 10th I was again called, and found her in great pain; the discharge of blood and broken down placenta were of the most offensive character. She stated that she had been perfectly regular up to her last period, which was delayed about one week. She had considerable fear, a temperature of 102° , and had had that morning a severe chill. On examination the uterus was found about four inches in depth, with part of a rotten placenta adherent to its right posterior wall. The uterus was in good position and perfectly movable, with both tubes enlarged and thickened, and at this time could not have been adherent to any surrounding structures. I removed the pla-

centa with considerable difficulty, used hot water irrigation with borac acid in the uterine cavity, which for a time gave her great relief. These irrigations were continued, and the uterus washed out twice a day for three days, all this time the tubes continuing to enlarge, until they must have contained several ounces of matter, and could have, at this time, been easily removed. The irrigations into the uterus were discontinued and those of the vaginæ were kept up. I became very much alarmed at her condition, and stated to the husband that an operation was needed to save his wife's life. This he refused, and begged that I should do all I could without an operation. I yielded to his request, much to my regret, for I felt that nothing but an immediate operation and removal of the tubes, which then would have been possible, as there had been little if any leakage up to that time into the peritoneal cavity, would save her life. I believe that any man treating a case of this kind with the symptoms as positive and the indications as plain as they were in this case for operation, should have retired from the case, for by so doing he clearly indicates that his mind is made up as to the treatment, and the only chance to save, and by so doing shows to the medical attendant, who may be called to the case, the proper line of treatment, and if he does not take the warning, the post mortem will follow and show who was right.

There were several well marked changes in her condition, indicating rupture, or leakage from the tubal abscess, and her condition steadily grew worse, until the 20th, when in consultation with my brother, we persuaded the family and the patient to let me operate and give her that chance for life, as she was in a very bad septic condition. As the consultation was at a very late hour at night, she was opened early the next morning (21st). I found the internal organs matted together, uterus much enlarged, both tubes enlarged and ruptured, adherent to everything they touched, pelvis full of pus

cavities, pus cavities almost up to the kidneys on both sides; everything in a semi-gangrenous condition; but little bleeding from ruptured adhesion or from wound in opening abdomen, which is never a good indication. A great quantity of pus was evacuated, at least two pints, of the most offensive character. Irrigations and drainage were used. The patient was a very large woman, consequently the largest drainage tube we could find was used. She rallied from the ether, and for the first six hours there was discharge from the drainage tube two pints of very offensive serum. It gradually lessened in quantity, but increased in offensive character. A cleaning of the tube was made every half hour; after cleaning, warm borac acid was injected through the tube. It improved matters only for the moment. Patient died twelve hours after operation. Present at the operation: Drs. Joseph Price; E. W. Cushing, of Boston; Atherton, Toronto; Roseburg; Hamilton, Ontario.

Dr. W. H. Parish said that his remarks on this subject of pelvic abscess made at the recent meeting of the American Gynæcological Society, had been misquoted. He had stated there, and wished to repeat here, that these abscesses should be opened very early. If operation was not resorted to the patient would most probably either die or become a confirmed invalid. He was not one of those who believed that pus always originated in one particular point in the pelvic. He did, however, believe that the large majority of cases occur because of pus primarily in the tube. He believed also that an uncertain number occur from pus originally formed in the areolas tissue, beginning probably because of lymphangitis of that particular locality. The question arises as how best to operate in these cases. He holds that there could be no absolute rule of procedure. He believed that in the majority of cases it was wiser to make an opening in the median line and explore the peritoneal cavity, unless we are very certain that the abscess is not

in the tube or ovary. If we are sure that there is no involvement of the appendages, and that the pus is not intræ-peritoneal, the abscess may be opened without going into the cavity. He called attention to a procedure which he had adopted in a few instances, where small abscesses were located in pelvic areolar tissue.

In one instance Dr. Longaher made an incision in the median line. The tubes and ovaries were found free from pus, but of course congested. With the fingers within the abdomen we felt in the anterior-pelvic wall an abscess. An incision was made over Poupart's ligament as for ligature of the external iliacs. Then passing deep into the pelvis, pus was reached some distance below the brim of the pelvis.

In another case there was an indurated mass apparent above the left half of the pelvis, not recognized through the vaginæ, except on very deep pressure. An incision was made above Poupart's ligament. After cutting through a very dense tissue, he came to a minute cavity which contained no pus, but a somewhat serous fluid containing flakes of lymph. These are only two of a considerable number of pelvic abscesses on which he had operated, and he had never regretted operating early.

Dr. J. M. Baldy wished to take this opportunity of emphasizing views which he had expressed before the recent meeting of the American Gynæcological Society. He did not agree with Dr. Parish as to the pathology of this affection. He granted that there was the possibility of an abscess occurring in the pelvis, such as occur in other parts of the body from the scalp to the foot, but that these must be most rare. The gentlemen, connected with what Dr. Parvin had been pleased to call "the Philadelphia Dispensary School of Surgery," had now done over one hundred of these operations, and had not yet in a single case come across one which had not begun primarily in the tubes or ovaries. In every case the diseased mass

removed has been tube, ovary and other tissues involved.

Dr. Parish, at this point asked wherein his views differed from those of Dr. Baldy. He had to leave that to be judged from what Dr. Parish had said. In regard to treatment he must again dissent from the views expressed. He thought that an absolute rule could be laid down. Where pus was found in the pelvis, early or late, the proper procedure was to open the abdominal cavity and remove the seat of the disease, where it was possible and where it was not possible to remove, proper drainage should be established. However, it would be found comparatively seldom that the disease could not be taken out by a bold operator.

Dr. Joseph Price thought that he understood Dr. Parish. He himself had said repeatedly that we might have an abscess in any part of the body from the scalp to the matrix of the nails; we may have it in the cellular tissue of the pelvis as well as in the axila or neck, but he must hold to what he had said, that in all the pelvic abscesses that he had seen, he had not found one not due primarily to tubal disease. Among the recent papers on the subject, one calls attention to the treatment by drainage through the vagina. He did not see how this will avail much in bilateral accumulation. You may evacuate half of the tube, but you have left a condition of affairs such as is found in an old bubo. In pelvic abscess we have just the condition of affairs which the surgeon is asked to treat in the groin, axilla or popliteal space. In such a case he would remove the disease by a clean enucleation and perfect a cure. He had not seen a case of pelvic abscess which could not be removed in this way, and he should say that such cases did not exist. One gentleman of Washington, went so far as to say that after drainage by vagina in a case of double hyposalpinx, recovery had followed and the woman had borne children. He might as well have said she had con-

ceived, notwithstanding her husband had previously been castrated.

Dr. M. Price remarked that it was a question whether you could say that the tube was diseased or not, by simply looking at it. He remembered a case a few weeks ago, where the tube was congested and inflamed. It seemed to be simply swollen, but on pressure there was forced from the fimbriated end a drop or two of as perfect gonorrhoeal pus as could be found anywhere. If he had not seen the discharge, he should have thought that there was no disease save congestion.

Dr. B. C. Hirst exhibited the following:

First—An exencephalic monster, a rare form of monstrosity, sent him by Dr. Baker.

Second—An anencephalic monster, a more common form, given him by Dr. E. S. Clark.

Third—A foetus papyraceus, interesting in connection with an idea sometimes entertained that this is a proof of superfoetation. The present specimen was sent by Dr. Cree-man. It was evidently a case of twin pregnancy. One foetus dying at about the eighth or ninth week had been mashed flat by the other.

He also exhibited a modified form of Brunn's modification of Simpson's cranioclast. The modification consist in adding to the instrument a pelvic curve and also arranging it for axis-traction if so desired. In perforation of the head coming first, it is of advantage to use a dull perforator. Fasten a strong volcella forceps in the scalp, cut the scalp with Emmet's scissors, and then thrust the perforator through the skull. In perforation of the after coming head he had found, in a case seen last summer, that it was more convenient to go through the neck and through the pharynx. This simplifies the operation in some cases, and makes it safer for the mother.

Dr. Joseph Price called attention to two instruments he had devised a few years ago for the same purpose. As we know, there is a large mortality following craniotomy, due

principally to mutilations and contusions of the mother's soft parts. Sometime ago, while dealing with a number of these cases in greatly deformed women, the children being dead (and I may say that I have never destroyed but one living child), it occurred to me to make an instrument through which we could work, one easy of application, a speculum to protect the maternal soft parts and for fixation and compression of the head, an instrument which could be applied in pelves of one and one-half inches. I have tried the instrument which I now show in all the deformed pelves at the University. You can crush heads with it, and again it serves as a perfect tractor. This other instrument you will all recognize. I have made the end of the handle of one blade sharp. Over this I place a piece of leather, introduce it and perforate the skull through the leather. This instrument is also a good tractor in case of after coming head; it is also a good instrument to use in crushing the bones of the face. These two instruments are all that I have found necessary.

Dr. Parvin thought that the objection to the method proposed by Dr. Hirst, is that the brain substance cannot be evacuated as readily by an opening through the neck, as by one behind the ear. For instance, he had occasion last week to perforate the head in a head last delivery, the child being dead. He made an opening behind the ear, and then with an ordinary forceps the head was compressed and the evacuation of its contents readily took place. It might be easier in some cases to perforate through the neck, but the removal of the skull contents will be much more difficult and imperfect.

Dr. G. Hoffman said that in perforating the after coming head, it was considered that by drawing on the body the head can be fixed and readily perforated.

Dr. Bernardy had some years ago found it impossible to perforate the skull posterior to the ear in a case he then had. He was able to draw down the inferior maxillary and perforate through the palate, and within a

few minutes deliver a hydrocephalic child. He did not confine himself to any particular portion of the skull for perforation, but operated on the most accessible part. The moment the head is perforated he breaks up the brain with the same instrument without withdrawing it, and then breaks up the skull with Thomas' or Meigs' forceps.

Dr. B. C. Hirst said it would theoretically seem that an opening posterior to the ear would be better than one through the neck, but in his case there was no trouble at all about the escape of brain matter. It would undoubtedly be better to perforate the skull directly, if this can be easily reached, but where this cannot be done perforation of the skull through the neck will be less likely to injure the mother.

Dr. W. J. Taylor presented, with the following remarks, three uterine myomata: These three tumors were removed to-day, from a case of considerable interest. The patient, a woman, aet. thirty years, was married on the 7th of last May. On the 20th she had her last menstruation, and from that time considered herself pregnant. The abdomen began to swell and she had a good deal of pain. A few days ago she sent for me and I found her with the abdomen much enlarged, and presenting the symptoms of pregnancy. On the right side, however, there was a hard mass which puzzled me very much. She was seen by Drs. W. W. Keen and B. C. Hirst, and the conclusion was reached that an operation was necessary. To-day abdominal section was made. It was found that the uterus contained a foetus, and that there were three fibroid tumors; the largest was sub-peritoneal, the smallest was attached by a small pedicle, and the second in size was also sub-peritoneal. These were removed, and the patient is at present doing well.

Dr. W. W. Keen said that Dr. Taylor had hardly done himself justice in his modest narration of the steps of the operation and in his reference to the question of diagnosis.

When I saw the patient last Monday, it was a question whether the large mass on the right side was a uterine myoma or a tubal pregnancy. It had grown rapidly and pariparsu with the uterus. The facts in favor of its being a solid tumor were its density, and the fact that the pulsation of the aorta could be distinctly heard with the stethoscope, at every point over the tumor. Its rapid growth seemed to be opposed to the idea of myoma.

Dr. Hirst was of the opinion that it was a tubal pregnancy, at the same time recognizing an intra-uterine foetus also. She had albuminuria. When Dr. Taylor opened the abdomen two large tumors presented, which coalesced below, but were separated above. Passing the hand into the abdomen the left tube and ovary were found normal. On the right side it was found at first not possible to recognize the ovary and tube, but by enlarging the incision the hand was passed well down and the ovary and tube found. By the side of this tube was a vein considerably larger than my thumb. The pregnant uterus was recognized as the large tumor to the left. It was soft, elastic and dark in color. That to the right was recognized as a neoplasm.

While I lifted with difficulty the upper end of the tumor, Dr. Taylor incised its capsule and enucleated it until he came to the attachment to the uterus, which was over a space of three or four inches in diameter, when the weight of the tumor then caused the uterine tissue to tear and the large sinus began to bleed very freely. I next grasped the pedicle with the thumbs and forefingers of the hands while he stripped off the sac. The tumor was then quickly removed, and the uterine tissue and the wall of the sac were seized with large hæmostatics and the hæmorrhage controlled. It was necessary at several points to introduce sutures into the uterine wall itself to control the bleeding. The redundant portion of the sac of the tumor was cut away, and the edges brought together with the

continuous cat-gut suture. A drainage tube was passed down into its cavity. In at least two places and possibly four, there were, upon the uterine wall, small masses about half the size of my little finger-nail. These looked like beginning malignant tumors. From the appearance and the rapidity of the growth, I think that this may be a sarcomatous tumor, though it is possibly a simple myoma.

Dr. Parvin thought that there was one point that even Dr. Keen omitted. He saw the operation and the great mass of the tumor was included between the layers of the R. broad ligament, so that the first incision was through the anterior layer of the ligament. Formerly in removing a sub-peritoneal fibroid from the posterior surface of the uterus, the pedicle partially tore while the ligature was being applied, and there was free hæmorrhage. He finally succeeded in stopping the bleeding, by the use of the continuous cat-gut suture, after other measures had failed.

Dr. Hirst said that Dr. Keen had correctly expressed his views. The symptoms pointed strongly to extra-uterine pregnancy. If the case had been allowed to go on to term, cæsarean section would have been required, as the tumor filled up the pelvis. He had looked up this subject of injuries to the pregnant uterus, and had found some interesting cases. In one case the woman was thrown to the ground and jumped upon when six months pregnant. The foetus was killed, but she went on to term.

In another case tracheorrhaphy was performed during the second month of pregnancy. This case went on to term.

In another instance a number of leeches were applied to the cervix of a pregnant uterus without any interruption to pregnancy.

In a case I had last spring, the woman was squeezed between a bale of goods and the wall, and was seriously injured, but she went on to term.

A German operator has such confidence

in his ability to plunge a trocar into the abdomen without doing harm, that he advocates the occasional withdrawal by aspiration of the liquid in hydramnios with very great distension of the uterus, allowing the child to go on to term.

Dr. Parish said that the removal of ovarian tumors during pregnancy were recognized as a proper operation, but that the removal of uterus sub-peritoneal fibroid tumors during pregnancy was not regarded as a proper operation, except under certain special circumstances. The injuries necessarily inflicted on the uterus in their removal, are liable to induce abortion. It would be interesting to have the further history of this case. The microscope alone could determine the character of this growth. Under ordinary circumstances the rapidity of the growth would point to sarcoma, but it is well known that in pregnancy fibroid tumors occasionally take on a rapid growth. He supposed that Dr. Hirst did not refer to the cases he had cited, as indicating rules of practice. It must be the urgency of the condition which justifies operations on the pregnant uterus. While pregnancy may go on after injuries to the uterus, there are numerous unreported cases where the opposite has been the result. Where a sub-peritoneal tumor can be lifted from the pelvis, pregnancy may go on.

Dr. J. Price thought that obstetrically the case was one of great importance. Some time ago he had called attention to three parallel cases. They all went to term with a pelvic tumor, and died undelivered. The question of differential diagnosis scarcely concerned many operators at present; all that was required was the knowledge that there was a tumor present. We should never wait until the patient's general health has been impaired, as this is a departure from that generally followed in general surgery.

Dr. Hoffman had recently been consulted by a woman who stated that she was pregnant, and that at previous labors the baby

"had to be mashed up." The pelvic cavity was found to be filled with a tumor. She was advised to undergo an operation for its removal. This she refused. It seemed to him that there could be no doubt of the propriety of immediate operation in cases like the one before him.

Dr. B. F. Baer believed that, in this case, after the exploratory incision had been made, and it was found that no extra uterine pregnancy existed, it would have been better to have closed the incision than to have removed this amply located solid tumor; but since the removal was determined upon, he thought it would have been better to have amputated the uterus at the neck, than to have permitted it to remain with a great wound in its side and in the broad ligament. It is not likely after such a serious operation the pregnancy will go on to term anyway, and abortion occurring within a short time after the operation will certainly add to the risks of the patient. He asked if there were any subjective signs of pregnancy (extra-uterine) in this case, such as the peculiar pains, uterine hæmorrhage or discharge of decidua.

Dr. Keen thought that the removal of the uterus would have been a wholly unjustifiable procedure. It was possible that the woman might miscarry, but it was also possible that she would go to term. It has been shown that pregnancy is not necessarily a bar to operation. Not only would the sacrifice of the foetus have been unjustifiable, but hysterectomy would have made a young married woman sterile. The added dangers of hysterectomy, too, might have turned the scale against the patient.

Dr. M. Price asked if Dr. Baer would expect to have uterine hæmorrhage in a case of extra-uterine pregnancy where there was also a foetus in the uterine cavity?

Dr. B. F. Baer said that he would expect in such a condition, that as the result of the extra-uterine irritation, abortion would take place, and then we would have both

hæmorrhage and decidua. In regard to the removal of the uterus in this case, it seemed that Dr. Keen condemned the procedure because of his anxiety to save the child. He, however, believed that the child would have had a better chance for its life if nothing had been done. But if operative measures were imperative, he still held to his former opinion. In answer to still further questioning from Dr. M. Price, he said that he believed that hæmorrhage may occur, and the extra-uterine sac remain unruptured.

He had seen a case which supported that view. The patient, after having her menses for two months, was one day seized with severe pain in the R. iliac region, which was followed by shock. She fell in her yard, and when her physician arrived he found a condition of shock as well as hæmorrhage. A few weeks after she had a similar attack. He was then sent for and the diagnosis of extra-uterine pregnancy arrived at. This was five years ago, and Thomas' method of operating by the vagina and opening the sac with a hot knife, was followed. The sac was found with no evidence of rupture in it. The liquor amnii was clear and no evidence of hæmorrhage into the cyst, which there would have been had a rupture taken place. The foetus was indeed alive. The patient died on the fifth day after operation.

Dr. Wm. J. Taylor closed the discussion by saying that in this case the tumor was absolutely fixed. The woman's general condition was poor; the pulse 120; the patient unable to eat; she suffered intense pain and diarrhoea for a number of days previously. The tumor was also growing rapidly. The urgency of the case seemed to call for some relief. There was albuminuria. If the matter had been allowed to go on to term—provided the woman had lived that long—the risks to both mother and child would have been greater than they were at the present time.

SEVEN CASES
OF VAGINAL
HYSTER-
ECTOMY.

TECHNIQUE

OF THE

OPERATION

BY

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CHICAGO, ILLINOIS.

The method adopt-
ed in performing these
operations, illustrates
the fact that the tech-
nique of colpo-hyster-
ectomy is undergoing a
transition stage. It em-
phatically illustrates
the advantage of com-
pression forceps over
ligatures in hæmo-
stasis.

Case 1.—Mrs. S.,
aet. 47, mother of
nine children, always
well, presented her-
self February 1, 1887,
with epithelioma of

the cervix uteri. It did not involve the
vault of the vagina, the broad ligaments did
not seem to be thickened. Mobility of the
uterus was complete. After preparatory
treatment with a daily laxative and diuretic
for a week, the operation was performed on
February 8, 1887.

The cervix was easily drawn down to the
vulvar orifice and, with scissors, its vaginal
attachment was divided. Strong adhesions
to the bladder and rectum were found, and
in consequence thereof, the rectum was
opened in one place and the bladder in two
places in the process of freeing the uterus
from these two organs. After the two
broad ligaments were sufficiently isolated
and the fundus was turned backwards and
brought down, the left broad ligament was
first penetrated and divided into two sec-
tions with heavy ligatures, and tied as
securely as hands could tie them. It was
then severed as closely to the corpus uteri
as possible, and the whole organ came out
of the vagina. Treating the right broad
ligament similarly was a much easier matter,
because the uterus was down and out of the
way. This attachment was at once severed,
and the whole organ was then freed from
the patient. The ovaries were then re-
moved. The rent in the bowel was closed

by continuous suture; but it was done at a
great disadvantage from its peculiar posi-
tion, back of the symphysis and looking
directly backwards. To draw down the
bladder and to so evert the edges of the
rent as to apply the stitches was a delicate
and difficult task. The smaller rent, undis-
covered at that time, was not closed. Just
as this sewing up was completed there was
observed welling up in the shapeless ex-
cavation left after the removal of the uterus
great quantities of arterial blood. Which
broad ligament it came from it was impos-
sible to decide. After a long time the
bleeding vessel, which was in the right
broad ligament was secured, but not till
after a ligature was pushed off of the left
broad ligament. All vessels were eventu-
ally secured, but not till a great quantity of
blood had been lost. The top of the
vagina was closed from before backwards
with continuous suture, the ligaments were
brought down, iodoform gauze stuffed into
the vagina and the patient put to bed.

Reaction followed reluctantly. She died
from peritonitis and exhaustion in forty-five
hours, having passed eight ounces and one
drachm of urine in the meantime. The
autopsy revealed a small rent in the
bladder, which was concluded to be the
cause of the peritonitis.

Case 2.—Mrs. C., aet. 36, laundress; tall,
spare, nervous, sanguine temperament, pre-
sented herself February 10, 1887, with
a small epithelioma in the cervix uteri.
The upper portion of the vaginal cervix
was not invaded. The operation was per-
formed on February 25, 1887.

The uterus was easily drawn down to the
vulvar orifice and freed from its vaginal at-
tachment with the scissors. The bladder
was closely attached to the uterus, and
before its complete separation was accom-
plished it was opened. The opening into
the Douglas cul de-sac was easily effected
and the fundus rocked backward through
the sacral hollow, down and out through
the vulva. The broad ligaments were se-

cured with silk ligatures and the uterus removed after its separation from them. The ovaries were separately removed immediately afterwards. In closing the vesical rent the left broad ligament shed its ligatures and bled profusely. Hemorrhage was soon checked. The vagina was closed from before backwards, the ligatures were brought down into the vagina, and the latter organ was filled with iodoform gauze.

The patient rallied well. The temperature rose to 100° on the second and third days. Thereafter nothing worthy of special mention occurred. On the tenth day an elastic ligature attached to the patient's left thigh was tied to those protruding from the vagina, and in five days they began to come away and in forty-eight hours the last one was removed. In thirty-six days she left the hospital.

Case 3.—April 13, 1887. Mrs. C., aet. 49, widow; last confinement twenty-eight years ago; she is still menstruating. Examination reveals an epitheliomatus degeneration of the cervix with about one-fourth inch of uninvaded tissue of the cervix between the cancer and the vaginal vault. The uterus was about four inches deep and it bled freely upon withdrawing the sound. The fundus was large and was easily felt through the abdominal wall. The uterus was freely movable, indicating the non-implication of the lymphatics in the broad ligament. The absence of invasion of the vaginal wall and of the circum-uterine tissues led to the recommending of an operation for the removal of the entire uterus.

From April 19th till May 5th, the date of the operation, she took cascara daily, and digitalis and acetate of potash. The condition of the excretions seemed as nearly perfect as possible preparatory to an operation. The patient slept in the hospital the night before the operation, and took the customary general antiseptic bath and had administered several vaginal bichloride douches.

Operation.—The cervix was drawn into the vulva with two large, lock, vulsella forceps, while the vaginal attachment to the cervix was divided with the scissors. Gradually and patiently the circum-cervical tissues and the attachments of the bladder and rectum were crowded away with the finger nail till the Douglas cul-de-sac could be opened. Then it was found quite impossible to reach the top of the fundus with the fingers. The cul-de-sac of peritoneum between the bladder and the uterus was then opened, with hope of being able to retroflex the uterus by means of the fingers placed before and behind the uterus. This manœuvre was found likewise to be an impossibility. After repeated vain attempts to reach the top of the fundus with the fingers, that method was abandoned. Trial of very deep supra-cubic pressure to thrust the fundus back towards the sacral hollow, and at the same time of grasping and pulling down the fundus with a small vulsellum forceps thrust through the Douglas cul-de-sac at last succeeded, after three or four tearings out of the forceps, in getting the top of the uterus out into the world.

Snap forceps were then placed on the broad ligaments and the latter divided. The subsequent dressing consisted in tucking a thin layer of iodoform gauze into the vagina, care being taken to avoid separating the top of the vaginal walls. The danger of this separation must be patent to every observer. Ribollet attributes the death of one of his patients to crowding too much gauze into the upper vagina.

No stitches were used to close the upper end of the vagina. Its borders were permitted to collapse and to close in any position that they chanced to occupy. One ligature was used for a vaginal artery. No attention was paid to it in the final dressing. The ovaries were both removed after the uterus was finally separated from its attachments.

The patient reacted well from the shock of the operation, which consumed seventy-

five minutes. Her daily progress was so uniformly satisfactory that any detailed descriptive statement of it would be monotony itself. The pulse ranged from 90 to 120 beats per minute. It was 98 when she left the hospital. The temperature reached 100° one morning only, and on five evenings, from third to seventh day inclusive.

The forceps, one pair on each ligamentum latum, were removed at the end of forty-eight hours. I saw Mrs. C. fourteen months after the operation and she was the picture of health. She had filled her position as matron in a boys' reformatory school for a year and was, to all appearances, perfectly well.

Case 4.—Came to me in October 1887, for an incoercible hemorrhage from a small fibroid tumor in the posterior uterine wall.

The patient, a woman 47 years of age, had borne eleven children, and has been having hemorrhage for eleven years. Everything in the way of medicine has been tried. The uterus has been curetted upon two different occasions, and she came to me supposing the ovaries must be taken out. I explained to her that I had had two cases of removal of the ovaries for uterine hemorrhages, but that the operation had not cured them. I also explained to her the danger of removal of the uterus and she consented to the operation. The steps were simplicity itself, being a repetition of what I have given. The cervix was easily drawn to the vulvar orifice and the cervical attachments freed at once as speedily as possible. An incision was made in the cul-de-sac of Douglas and I was able with a knife to divide the tissues without any trouble. When the two broad ligaments were all that supported the uterus they were secured with long snap forceps, and the broad ligament divided on the right and left sides. Snap forceps were then put on the neighboring deep vessels. That was all the hæmostatic means resorted to from beginning to end.

She left the hospital in five weeks in a

satisfactory condition. Nine months afterwards she reported and I did not recognize her. She had rosy cheeks and had gained twenty pounds in weight. Her old strength and energy had returned.

Case 5.—Patient 47 years of age. Cancer of the cervix uteri involving a small amount of the vagina. The cervix was easily denuded and the broad ligaments grasped with the compression forceps, and the uterus cut away. The lymphatic glands in the left broad ligaments were involved. This patient will die of cancer probably, but her death will be much less distressful than it would be if she had had no operation performed.

Case 6.—Patient 37 years of age. Operation performed at the Presbyterian Hospital April 16, (circ.) 1888. The patient, when eight months advanced in her pregnancy, was standing at the front gate one morning in the hot sun, in August, 1887, and all she remembers is, that suddenly she had queer feelings and went into the house.

The next thing she knew, friends came in and were looking at the great amount of blood under the bed. It seems that she had grown delirious, and, feeling something in the vaginal region, had thrust her thumb and finger into the vagina and caught hold of the cervix, and by main force had torn away a piece as long as two fingers of my hand, leaving it hanging in the vagina. The next day the attending physician amputated the piece and the woman went on to full term, and was regularly delivered. During the month of March, 1888, I saw her, and right in the angle from which was torn this piece was a mass of sprouting granulations that were subjected to microscopic examination and were pronounced cancer. The case was laid before the patient and immediate hysterectomy advised, which was agreed to. This case, which was my sixth, illustrated one of the unpleasant features of taking out the uterus through the vagina.

The patient was placed in the extreme

lithotomy position, a vaginal retractor put in over the perineum and drawn down; large lock vulsellum forceps were placed on the cervix, and the latter was drawn down as far as possible. Dividing the vagina from the cervix with the scissors was an easy matter, and then separation of the tissues all around from the cervix with the finger nail was easily accomplished. Large snap forceps were placed on the left broad ligament. I found I had not sufficiently freed the uterus from the rectum, and cut a little with the scissors, doing a thing I will never do again. I thus reduced the size of the right broad ligament sufficiently to be grasped with another forceps. The uterus was removed in eleven minutes, but I spent three quarters of an hour trying to arrest hemorrhage. It seemed as though every shred of divided tissue was bleeding.

After my first case of hysterectomy I had constructed a very large retractor, whose blade is $5\frac{1}{2}$ inches long, $2\frac{1}{4}$ inches wide, with a suitable handle placed at right angles. The retractor was introduced into the vagina, flat surface downwards, and the anterior wall of the rectum was perfectly exposed, and the bleeding artery was quickly found and seized. I had cut it off, in freeing the rectal attachment to the uterus, with the scissors. Forceps were placed upon this vessel, which completed the arrest of the hæmorrhage, and the patient was put to bed after tucking in some iodoform gauze thoroughly around the forceps which was left there. In addition to the two large lock forceps I left thirteen others in the wound, which were taken off in twenty-four hours. The larger ones were taken off in forty-eight hours. The patient had no bad symptoms, and left the hospital in three weeks and two days.

Case. 7.—Operation at the Presbyterian Hospital May 6, 1888. The patient, 42 years of age and a Scandinavian, had borne several children. The attending physician had curetted the inside of the uterus for hemorrhage, and had succeeded

in getting away quite a large piece of something, which he sent to the pathologists of the University of Michigan, who sent it back with the report that it was a rapidly growing carcinoma. The removal of the uterus was determined upon. This organ was small in size, and when exposed and drawn down with the vulsellum forceps, it was brought easily to the mouth of the vagina. The vaginal wall was separated and the uterus brought down and removed in eight minutes. Four forceps only were used in this case, the hemorrhage being easily checked, presenting a marked contrast to the preceding case. The patient was taken out of the operating room, completely dressed and ready for bed, in thirty-two minutes after the commencement of the operation. No attempt at celerity was made in prosecuting the operation. She recovered without a bad symptom. The forceps were taken off in forty-eight hours. There was no rise of temperature except in the afternoon, when it would go up to about 100° , and then go back again in the morning, showing that there was no blood poisoning present. There was one peculiarity in this case. The operation was done at 10.30 o'clock Sunday morning. Orders were left to catheterize the patient every six hours; she was catheterized shortly after the operation, but no urine was drawn, and again at six o'clock, without result. Just before completing these operations it is my custom to inject a solution of milk and water into the bladder for the purpose of detecting any rupture of the bladder, and it revealed that the bladder was not ruptured. I knew, also, that I had not included the ureters in the forceps, because I had kept too far away from them; therefore I felt that it must be a suppression of urine. I saw the patient that night between nine and ten o'clock, and the nurse said the only thing she complained of was pain in the back, referred to the renal region. Poultices were ordered, and the next morning at six she was catheterized and a drachm and a half of

urine only was obtained. A hypodermic injection of a half grain of pilocarpine was then administered and I catheterized her four and a half hours later and drew off fourteen ounces of urine. With the exception of that one apparently bad symptom, the patient had an uninterrupted recovery.

The report of the foregoing cases shows that the mortality of colpo-hysterectomy is not necessarily high, and that it is a comparatively safe operation. A careful investigation of the literature of the subject leads to the following remarks on the

INDICATIONS
FOR VAGINAL
HYSTERECTOMY.

(a) Ten years ago, and indeed until quite recently, the chief indication for the performance of vaginal hysterectomy was malignant disease. At present it is agreed by all operators that the earlier it is performed for cancer the greater are the chances for its non-recurrence. This dread malady always returns sooner or later after amputation of the uterine cervix, and of course proves fatal; whereas, when the whole organ is removed, the patient is given the only hope of a permanent recovery. Hysterectomy does not always prevent recurrence of the development of this neoplasm, yet it offers the best results. Indeed, it is far better to perform colpo-hysterectomy were we positive that it would develop later, because the death from cancer after this operation is infinitely less loathsome than it is without its performance. Where the broad ligaments are much involved and uterine ankylosis exists the operation should be avoided, because hæmorrhage is very difficult and secondary hemorrhage is more likely to occur because of the necrotic character of the tissues carrying the blood supply.

(b) *Procidentia Uteri* is another condition for which this operation is performed. Anaplastic operations do not always restore the organ to its normal level. Artificial

vaginal stenosis to the extent of the non-admission of the little finger has failed ultimately to relieve the procidentia through gradual dilatation of the vaginal channel.

(c) Fibrous bodies of the uterus which offer the point of departure for serious irregularities have constituted a cause for vaginal hysterectomy. Of course reference is had to small tumors. Heydenreich reports four cases of operation with four successes. He considers that at present it is impossible to pronounce upon the relative merits of vaginal hysterectomy and of castration for small fibrous bodies in the uterus. Péan recently reports a case of the same operation for multiple fibroids.

(d) The hysteroneuroses (inveterate dysmenorrhœa, neuralgia, convulsions, etc.), for which oöphorectomy is so often performed, Péan considers a justifiable cause for this surgical procedure. His reasoning is, that these neuroses sustain an intimate relation to the uterus itself, consequently the uterus should be included along with the tubes and ovaries.

(Caldwell. Paris Letter in Chicago Medical Journal and Examiner, February, 1887.)

THE TECHNIQUE
OF VAGINAL
HYSTERECTOMY.

The method of performing vaginal hysterectomy is by no means settled. It has been so recently added to the list of gynecological operations that its technique is changing very much. Indeed, gynecologists change their methods of performing this operation very rapidly. One year ago it was no uncommon thing to read that gynecologists were one and a half to three hours in completing a vaginal hysterectomy. This paper will describe a method requiring in simple cases, one-third to one-sixth of the time formerly required.

Much has been written upon this subject that will soon become obsolete. A great many steps in the operation formerly taken are, to say the least, quite unnecessary.

As a rule, all stitches and ligatures are wholly superfluous; indeed they can but be regarded as sources, to a certain extent, of sepsis. Observation would seem to indicate that the danger of septicæmia from the vagina is over estimated. In December, 1886, I presented to the Chicago Gynecological Society for examination, a case of *Anterior Vaginal Enterocoele*, which was being treated with a Fowler pessary. Subsequently she wore a Fowler pessary with a flat plate of hard rubber laid across the anterior two-thirds of the fenstrum of the supporter. The edge of the plate cut an opening into the enterocoele about three-fourths of an inch long, through which the peritoneal fluid oozed continually. Into this opening a small sound was introduced five and a half inches up into the peritoneal cavity. The vagina possessed all of its pristine septic nastiness and yet the patient, with every generally accredited facility for acquiring septic peritonitis, failed utterly to develop a symptom of that dread malady. This case would seem to indicate that our sharp fears of vaginal septic infection of the peritoneum in opening it through the vagina need re-organizing.

In this, and as in all other surgical procedures, the motto "Simplicity and Effectiveness," should be the guide. The complexity of proceedings of some reported operations would be ludicrous were the subject not so serious, when one considers the very few plain steps that are necessary to perform a vaginal hysterectomy satisfactorily.

Before operating, the bowels and bladder should be evacuated and ample antiseptic douching of the vagina, repeatedly used for twenty-four hours, should be performed. When much necrotic cervical tissue exists it may be thoroughly removed with the curette forty-eight or seventy-two hours before operating. If extreme antiseptic precautions are desired the vaginal walls can be thoroughly covered with iodoform twelve hours before the operation. Just before beginning proceedings, after anesthetizing the patient, a pro-

tracted hot bichloride douche can be used. It contributes to diminish the hemorrhage.

The best position to put the patient in, is the extreme perineal lithotomy position. Some gynecologists place their patients in the extremely awkward left lateral decubitus.

The various steps in this operation consist in:

First—Separating the uterus from its surroundings;

Second—Hæmostasis, and

Third—The subsequent dressing.

1. *Freeing the Cervix*.—In the great majority of cases, the vagina is sufficiently patulous to permit the ready removal of the uterus. In exceptional cases it is narrow and apparently undilatable and causes an infinitude of embarrassment to the operator. This obstacle to facile procedure can be easily overcome by dividing the perineum sufficiently to afford all desirable space. I know of no special preference of locality for making the perineal incision.

The cervix must be drawn down with forceps into the vulvar orifice if possible and the vaginal attachment severed with any cutting instrument, a bistoury, a blunt or sharp pointed scissors. Some operators prefer one instrument, others another. It is a trifling choice to make between them. A large, locking, three or four toothed vulsellum will answer every purpose for drawing down the cervix. It will close the os very compactly, thus avoiding the necessity for plugging the cervical canal to prevent the exit of uterine secretion. The vulva should be held open laterally by retractors deftly held just within the ostium; if they are thrust into the vagina too far they prevent the forced descent of the uterus. If they are wide enough a perineal retractor is unnecessary. When the *ostium vaginae* is widely patulous the retractors are not necessary. Just before making the initial cutting it is well to push up the cervix (which has been drawn down) to its natural level and mark with the eye where the vagina is attached, and then draw down the organ and

begin proceedings. This point is rather important because no one can tell where the vaginal wall terminates and the cervical covering begins, and one is invariably inclined to begin the denudation too far away from the cervix and thus to open the bladder.

The mucous membrane should first be severed from the cervix in its entire periphery. The process of enucleating the cervix from its surrounding cellular tissue can then be best prosecuted with the finger nail or any blunt instrument capable of dividing such tissues. A small experience soon enables one to prosecute this enucleation with the fingers easily.

The greatest diversity exists in different women as to the distance from the vaginal vault to the peritoneal cavity. Without especial attention being called to this subject, one would suppose this distance to be pretty uniform. There is no means of determining its extent before operating. This variation in peritoneo-vaginal space has led to the very common remark in reports of cases, that the "adhesions between the bladder and the uterus were very extensive." In some cases it is from four to five times as thick as it is in other cases.

In freeing the uterus from its attachments the gravest necessity exists for keeping exceedingly close to the cervix anteriorly, otherwise the operator will find that he has opened the bladder almost before he has any idea that he is dangerously near it. By keeping as closely to the cervix as possible another important, nay vital, advantage will be gained, viz: the avoidance of wounding the ureter, which perforates the bladder just above the middle of the anterior vaginal wall. Wounding this duct complicates matters most wofully in that it necessitates the extirpation of the kidney. The surest way of determining the dangerous proximity to the ureter is to discover the pulsation of its accompanying artery which is a branch of the uterine artery and is of considerable magnitude. Absolute

safety from wounding this important channel is guaranteed to him only, who keeps closely enough to the cervix in its denudation. Very soon the finger can be made to penetrate the peritoneal cavity, as will be indicated by its feeling the fundus covered with the smooth peritoneum. The freeing of the posterior cervical wall should be prosecuted with the same care to remain close to the uterus and thus avoid opening the rectum. The finger easily penetrates the Douglas cul-de-sac and the body of the uterus can then be explored readily. Up to this point, when the peritoneal cavity is opened the hemorrhage is considerable though not at all alarming. It is best to proceed as rapidly as possible and not to attempt to check it. Generally speaking, torsion is all that is necessary to arrest hemorrhage from the arterial branches severed in this part of the operation. Furthermore, it will be found that the loose vaginal tissue, separated from its cervical attachment, very soon retracts and diminishes, or, wholly checks hemorrhage from the majority of the smaller severed vessels. When the severed artery has a firm groundwork of origin, as on the anterior wall of the rectum, torsion or forcipressure is advisable.

Martin first opens the peritoneum through the cul-de-sac of Douglas sufficiently to admit the finger which he uses as a guide for a much curved needle with which he sutures the vaginal wall outside of the opening, to the peritoneum above. About five such suturings are used posteriorly to the cervix. Similarly opening the ante-uterine peritoneal space, he sutures the vagina to the peritoneum with four sutures. Throughout his operation he uses sutures and ligatures freely. And yet he says, that hemorrhage "can be very voluminous even if the parts have been prepared by continuous suture." Such "very voluminous" hemorrhages can be avoided by avoiding this cumbersome and awkward suturing by using forcipressure on bleeding vessels.

In separating the cervix from its cellular

surroundings, cutting instruments ought to be avoided as much as possible, because the persistence of hemorrhage is greater from vessels that are cut than from vessels that are torn across.

It is a curious fact that in some cases the vascular distribution to the parts invaded by this operation, seems to be vastly greater than it is in others. In such cases every particle of divided tissue seems to bleed to excess. Experience with a very few cases verifies this statement. In some cases the two compression forceps on the broad ligament are all that are necessary in the way of hæmostasis, no forceps being used elsewhere in the area of the large wound produced; while in other cases, several compression forceps are necessary in addition to the two just mentioned. In the sixth case (of the seven cases upon which this paper is founded) thirteen forceps were used in addition to the two forceps on the broad ligaments.

Occasionally the peritoneum is tough and cannot be perforated by the finger; then a blunt pointed pair of scissors, closed, can be thrust into this cavity, quickly opened and withdrawn, leaving an opening large enough to admit the finger. The resistance of the peritoneum to the tearing by the finger will be increased in proportion to the amount of inflammatory invasion of that surface. Where perimetritis has not existed previously, the peritoneal cavity is opened with the finger very easily.

After opening the posterior cul-de-sac some operators push a soft sponge into the peritoneal cavity to remain there till the operation is terminated, for the purpose of preventing the entrance of septic material and of keeping the bowels up and away from possible injury. It also serves the purpose upon its withdrawal of drawing down the ragged edges of the peritoneum so that in the wound peritoneum lies apposed to peritoneum, a most desirable position to be secured.

When the uterus is not greatly enlarged,

the best method of procedure is to separate the cervix all around as high up as can be done before opening the peritoneal cavity, then the peritoneum should be torn, through the cul-de-sac of Douglas. Through this opening the left forefinger can be thrust and brought forward over the top of the fundus or hooked over either broad ligament and pressed down into the vesico-uterine fossa as a guide for opening the peritoneum at that point.

The advantage of this proceeding when not prevented by uterine hypertrophy, is very great, in that it contributes greatly to avoiding opening the bladder and avoiding wounding the ureters. With an opening safely made into the peritoneal cavity, both before and behind the cervix, all peritoneo-cellulo-adipose attachments of the uterus can be quickly severed clear out to the broad ligaments upon both sides, leaving the organ suspended only by these ligaments.

At this point two proceedings lie open: one is to bring the fundus down through the anterior cul-de-sac or through the posterior cul-de-sac—i. e., to acutely and completely flex the uterus—and the other is, to let flexion entirely alone and to proceed at once with the treatment of the *ligamenta lata* with reference to preventing their vessels from bleeding and dividing them, and thus freeing the uterus wholly from its attachments. Another plan resorted to before removing the organ has been, after securing the broad ligaments, to bisect the uterus from os to fundus, and to remove each half separately. It must be a very exceptional case demanding this proceeding. When the uterus is small, flexion is an easy matter. When it is large it is a very difficult matter and when very large it is a feat impossible to accomplish. A blunt pointed, curved scissors can be used in the uterine cavity to bring down the fundus sufficiently low to grasp it and effect retroflexion. Often it can be retroflexed only by grasping its posterior wall with a vulsellum forceps through the opened cul-de-

sac of Douglas and drawing it down a little way, and then grasping it again with a second vulsellum forceps above the first one, thus repeating the graspings till retroflexion is accomplished. When the uterus is not enlarged and the tops of the broad ligaments can be easily reached, flexion is wholly unnecessary. The ligaments can then quickly receive their forcipressure and the time of operating be abbreviated.

C. Staude¹ recommends opening the Douglas' cul-de-sac first and reflexing the uterus completely before opening the vesico-uterine cul-de-sac, in order not to permit the cancerous cervix to enter the peritoneal cavity as the fundus is brought downward. The ante-uterine peritoneal space thus shut off will effectually prevent the cervix entering it. However, with the cervix firmly held by the vulsellum forceps it is impossible for it to ascend into the peritoneal cavity as the fundus is brought down. Furthermore, if the ante-uterine peritoneal space be not opened the work of securing the lateral vascular supply must be greatly embarrassed, and the danger of wounding the ureters greatly, almost infinitely, increased.

The second step in the operation consists in hæmostasis, and it includes securing and dividing the broad ligaments.

The devices that have been used to secure hæmostasis are almost legion. Until very recently, silk ligatures only were used to secure the whole mass of the ligaments or to secure it in separate divisions by the continuous or by the loop method. Later the ecraseur, wire or the elastic ligature has been used. The cautery has been used. A separate cat-gut ligature for each tube has been recommended. Needles with a great variety of curves have been devised. The application of ligatures is attended with much difficulty, often failing in the most skillful hands. They cannot be other than a possible source of septic infection to the peritoneum. Sometimes they are in the wound

two or three weeks before coming away. Often it is necessary to attach to them an elastic ligature anchored to the thigh before they can be removed. They are wholly unnecessary, and in every way are infinitely inferior to the compression forceps. They prolong the operation greatly. Illustrative of this fact may be mentioned the length of time consumed by operators using them. It is no uncommon thing to read of operations, wherein ligatures are used, consuming one and a half to two and a half hours. One operator consumed three and a half hours in completing his operation.

In the sixth case of the seven upon which this paper is based, the uterus was removed in eleven minutes. In the seventh case the uterus was removed in seven minutes and the patient was taken back to her bed, after the wound was dressed and the bandage adjusted, in thirty-two minutes. Both patients made rapid, uninterrupted recoveries. In neither operation was any attempt made to expedite matters.

In addition to being a perfectly reliable method of hæmostasis, the forceps afford perfect drainage.

No originality is claimed for this use of the pressure forceps. It is simply an application of a method comparatively old in surgery. Snap forceps are often left in wounds for hæmostasis, as for example, in cases of extirpation of the rectum, and even in cases of laparotomy. Before using them it is always well to test the ratchet and ascertain whether they will hold permanently. In one of my large lock forceps the swivel post was broken off in a severe compression of it. Once a shank of a pair of forceps broke while I was removing it the second day after an operation. Occasionally forceps will unsnap, and a greater calamity can not befall an operator than to have that occur after leaving the patient. Tying the forceps together when in doubt about their reliability, can be done. They should be tested in every way to substantiate their integrity before the hour of operating. Not

¹ *Deutsche Med. Wochenschrift*. Berlin, 1886. xii, 602-604.

all pressure forceps will answer the purpose of hæmostasis in hysterectomy. Whenever the amount of tissue to be compressed is large the incomplete pressure at the distal end of the jaws is a serious possibility of failure to accomplish perfect hæmostasis. Sharp & Smith, of Chicago, have devised a forceps that answers every purpose. The bite of the distal end of the jaws is accomplished sooner than it is at the proximal end, through an ingenious curving of the upper jaw. The shank is large and strong and reliable.

After the peritoneal cavity before and behind the uterus has been opened and completely flexed, when possible, and is retained by the *ligamenta lata* only, the latter are ready to receive the forcipressure. With the forefinger of the left hand hooked over the superior margin of the left broad ligament the right hand can adjust the forceps to compress the whole width of the ligament and tighten the instrument to the last notch. It is best to attach it as near to the uterus as possible and yet leave room for dividing the ligament easily at its uterine end.

While adjusting the forceps it is of course scarcely necessary to mention the desirability of not including in them a bit of omentum or a piece of intestine. I know of no greater satisfaction in gynecological operations that the operator can experience, than in tightening hæmostatic forceps on a broad ligament—a satisfaction greatly intensified when one has previously had the appalling accident occur of the shedding of the silk ligatures after the broad ligament has been permitted to contract and withdraw into the pelvis up out of sight.

After the forcipressure on the left broad ligament is accomplished, the latter can be divided with the sissors. The whole uterus can then be drawn out of the vulva, and the right ligament can be compressed and divided very quickly and the uterus be wholly removed.

When the uterus can not be flexed, the forceps must be applied in the best way that

can be devised. With a much enlarged uterus the forceps can be applied to include broad ligament to the extent of the width of its jaws, that amount of broad ligament can be divided and up through the divided segment another pair of forceps can be pushed to include the remainder of the ligament, which in turn can be divided. When the finger can not reach the superior margin of the ligament, the lower section of each ligament can be seized and divided, when it will be found that the whole organ can be made to decend, and thus the entire ligament on each side can be divided. When this procedure is necessary, the difficulty of practicing it is greatly increased because of the narrowing of the vaginal space.

After removing the uterus, the parts should be allowed to retract in order to allow any vessels to bleed that are prevented from it by their traction. By this means arterial twigs are often discovered which otherwise escape detection. All further arresting of hemorrhages can be accomplished easily with forceps. This step in the operation is of vast importance, since hemorrhage can not only result fatally, but even when not large it can become the unsuspected cause of a fatal peritonitis.

Before closing the wound it is well to inject warm milk into the bladder to ascertain whether the bladder has been opened. If it has been opened the rent can be closed with the continuous suture of silk without much trouble.

The forceps on the broad ligaments can be removed in forty-eight hours. All other forceps can be removed at the end of twenty-four hours.

The last step in the operation concerns the management of the wound. The most elaborate sewing and draining of the vaginal cavity have been resorted to. Stitching the peritoneum to the vaginal wall is regarded necessary by some operators. Stitching the anterior marginal border and drawing the ends of the ligatures out through their centre have been very commonly done.

Running a purse-string suture around the top of the vagina with a piece of rubber draining tube and the ligatures passing through the middle of the puckering has been used.

Sewing up the vagina is wholly unnecessary in most cases. These various closings of the vagina have been regarded as essential to keep back the bowels and to prevent septicæmia through the vagina. Of the former there is a minimum danger. When the operation is completed the superior vaginal opening collapses as thoroughly and completely as the *ostium vaginae* closes. The oozing apposed surfaces at once interdigitate and inaugurate the preliminary processes of union. They do not lie idle for twenty-four or forty-eight hours before commencing union is set up. At the end of forty-eight hours the top of the vagina is all closed to the passage of fluids excepting through that portion of it occupied by the means of drainage.

The use of iodoform gauze in the vagina is of the utmost importance, and when wrongly used is a source of danger. The vagina must be absolutely aseptic, and herein the gauze filled with iodoform becomes of such great service. Stuffing the vagina too full of this agent keeps apart the walls of the top of the vagina and prevents their union. After the removal of the forceps the gauze need not be used. Antiseptic vaginal douches twice a day are all that is needed.

PUBLIC
PRINTER.

Mr. Herman A. Hasslock, one of the publishers of the *Nashville Journal* and the *Southern Practitioner* is a candidate for Public Printer under the incoming administration. If he displays the same energy and tact in the conduct of his canvass that he does in the management of his medical publications, he will, to say the least, make it interesting for his opponents.

PATHOLOGY AND HYGIENE.

THE PRESENT
MARRIAGE
SYSTEM.

BY
N. F. SCHWARTZ,
M. D.
SHANESVILLE, OHIO.

Read to the Mississippi
Valley Medical Association, at St. Louis, Sep-
tember 27, 1888.

It is a fundamental principle of our government that all men are considered "free and equal under the law," and that under this provision we are possessed of certain "inalienable rights, etc."

That this is right and proper in a com-

mmercial and political sense, none will deny or desire to abrogate. Upon this is based our rights of person and property. With the latter I have nothing to do, save as a matter of illustration, *i. e.*, Property we may buy, sell and possess; transfer by donation or for valuable consideration, etc.; always, however, upon proper representation. If such representation be false, the party injured may recover to amount of injury sustained, or punish the party offending under the criminal statutes. Our persons are protected against violence, to the extent of recognizing every individual's person sacred unto himself. Socially we possess rights under this general equality provision which are not environed by such legislative restrictions, and yet their ulterior is eminently important to the character, health and perpetuity of the human race. It is to the exercise of this important social privilege in its present status, I desire to call your careful consideration.

The present unguarded marriage system is attended by almost limitless evil consequences, since nothing is required of contracting parties, save consent, the attainment of proper age and a limited injunction to intermarriage, which I know is most egregiously ignored throughout the length and breadth of our land, and is tacitly tolerated by communities and disregarded by the ex-ecutors of the law.

Nothing appears on the statutes of Ohio,

I know, nor in fact in any other state, forbidding people saturated with the malignant, death-dealing and eminently transmissible virus of syphilis, from marrying or being given in marriage; or, the almost equally fatal germs of pulmonary consumption may lurk in their organisms, and still they may be licensed to marry and beget offspring. Insanity may for generations past have placed its terribly indelible stamp upon their ancestors, yet none dare say nay to their right to marry and beget, after their own kind, mental and moral depravity.

Now, according to the immutable law of nature, that "like begets like," what may be expected as the legitimate outgrowth of such unions? Our tables of statistics give the sad answer. Thousands upon thousands are annually called to untimely graves, after years of suffering and anguish, and doubly multiplied thousands of orphans are every year thrown upon the world, within them the germs of disease and death, something over which they had no control, destined to live a brief life of suffering; perhaps, to be cut down in the bloom of youth, or perchance, on the threshold of man or womanhood; possibly, still later as a fond and loving husband, wife or parent, torn from the bosom of a family dearer to them than even life itself. If insanity be the inheritance, it will only be to fill our asylums and prisons with beings bereft of all the attributes which constitute humanity. Though in a measure subject to the modifying influences of surrounding conditions, there remains no doubt that mental and moral obliquities are transmitted from parent to offspring.

On a most careful analysis of the somewhat imperfect tabulation of vital statistics, compiled by the Secretary of State of the State of Ohio, I find that fourteen per cent. of all deaths occurring in the years 1885 and 1886 were due to pulmonary consumption. Certainly a most appalling mortality of but one of the inherited diseases of which I have spoken, and this we have with us in

season and out of season; the sighing winds of March and November, the balmy breath of spring and autumn, as well as the most frigid blasts of winter, are laden with the groans of the dying and the mourner's sigh. Indeed, were the sorrow and suffering entailed by the present indiscriminate marriage system to be portrayed on canvas, Raphael or Rubens could scarce have given it color; or were pen to picture it, a more artistic hand than mine must guide it.

During the last decade, no department of the profession has made more rapid or substantial progress than sanitary science. Sanitarians have worked with a most commendable zeal in ferreting out the causes underlying the terrible epidemics which, from time to time, sweep over the face of our fair land and turn large cities and broad districts into one common house of mourning. Wherein they have succeeded we all rejoice with them, and their failures are disappointments not alone to them, but a source of universal regret to the country.

Quarantine, sewerage, ventilation, water supply, the disposition of garbage and night-soil, have in the main consumed the attention of health boards, particularly local boards. Sanitary associations in many instances have given their time mainly to fighting Asiatic cholera in Spain and Italy, with as much vehemence as did Don Quixote the whirlwinds, never pausing to view the wrecks strewn in the path of our unguarded, unrestrained marriage system, and suggesting measures promising even a minimum measure of relief, though recognizing as true that syphilis, pulmonary consumption, insanity, mental and moral, are as unerringly transmitted by heredity, as are diphtheria, scarlatina, smallpox or yellow fever by contagion and infection.

In suggesting a remedy for, or entering a protest against the present unrestrained and disease-generating system of marrying, means to invade a time-honored right, indeed, trespassing on social ground. I hope, therefore, you will bear with me, remembering

that in any measure of reform dealing with such deep-rooted practices, "line upon line, and precept upon precept" are necessary, even to a beginning. And when dealing with an evil which is indeed a menace to the perpetuity of the human race, we should rise to a full worthiness of what our titles declare us to be—doctors, not only nominally, but in the full, literal sense of the term—teachers in all matters pertaining to the health and well-being of those placed in our care. Like Paul, as he stood upon Mars Hill and declared to the Athenians the God whom they ignorantly worshiped, let us stand upon the raised plateau of professional learning, and as sanitarians, yea, even more, as humanitarians, proclaim to the people the terrible entailments of this matrimonial promiscuity and suggest to them some measures of reform.

But, with the foregoing truths before us, we are also confronted by the important interrogatories: *What measures of reform could and should be inaugurated? Have we a remedy?*

First, we should endeavor to educate the laity in the truth, by presenting to them the enormities of the evils resulting from too promiscuous marriages, and when once the dangers are fully, or even proximately comprehended, persons wishing to enter the married state will exercise some caution.

As it now is, caution seldom is given a place when entering the marriage contract, and the blind infatuations of love, wealth or position are the governing elements, and later, when least expected, conditions develop which were not suspected. Indeed, until such full co-operation of the people can be incited, the present head-long ignorance will persist in bringing upon those unborn, the sins and imperfections of the parent or parents. If it is fraudulent to impose upon another property for what it proves not to be, how much more fraudulent to practice deception when making the marriage contract, that contract which implies

the most holy relations known to humanity—that of husband, wife and parent?

Here we are met by the second interrogatory: *How can deception be made impossible?* By rigid legislative environment. All persons contemplating matrimony should be required to present themselves for careful examination and interrogation by some competent person appointed for the purpose, who should make certificate of the condition of the applicants; these certificates, signed by applicants, should be presented to the authorities granting the license, except in cases of syphilis or marked mental imbecility, when marriage should be *prohibited by law*. Such a regime would place facts as recognized by disinterested parties, plainly before the contracting parties, and would raise the consummation of the marriage agreement above the misty influence of a cranky infatuation, to the somewhat unromantic realm of facts and dispassionate judgment, where the good of mankind demands it should be and long should have been.

A full knowledge of the truth, even though it did not prevent marriage, would at least prevent subsequent unhappy surprises, should hereditary predispositions develop into realities; or, knowing the dangers ahead, persons unfortunately possessed of some hereditary disease, might avail themselves of the advantages of climate, occupation or some other influence, and thereby delay, or possibly, wholly prevent the development of the disease to which heredity would render them subject.

THE EYE

BANDAGE.

The use of bandages in wounds of the eye should be abandoned.

It often leads to serious results, by confining the secretions of mucus and tears in contact with an abraded surface or a punctured wound, and tends always to increase the temperature by the closure of the lids and the exclusion of air.

UNIFORM MEDICAL LEGISLATION.

BY

E. A. FISHER,

M. D.

LONG PRAIRIE, MINN.

Read to the Mississippi Valley Medical Association,
at St. Louis, Sept. 25, 1888.

Among the many obstacles to the progress of medical science, perhaps none presents more or graver features than the various forms of quackery. Some of the most prominent methods of former times, it is true,

have become extinct; but yet under various disguises, the evil still flourishes and in point of fact, is little, if any less than before laws were enacted for its suppression.

In this State the law of 1883 required all graduates in medicine and surgery, to be registered with the clerk of the district court, their diplomas first being examined by the State Board of Medical Examiners, whose certificate constituted the basis of such registration. It also admitted to practice such others as might present affidavits of having practiced in this State for not less than five years prior to March, 1883. This compromise measure was urged by the friends of non-graduates, with such persistence that its acceptance was necessary to the passage of the original act. The result was the enrollment of a motley crew of *licenciates*, many of whom were mere neighborhood "oracles"—men and women who had learned the partial use of a few common remedies, and occasionally dispensed them among their less informed associates. As it was not made the special duty of any officer to call in question the genuineness of these affidavits, it is no subject for wonder that many obtained licenses who were types of the very class the law was designed to suppress.

Then came the law of 1887, whose originators and advocates proposed to cover the entire ground—to make it, in short, the *acme* of medical legislation. But instead of curtailing the privileges already granted to this horde of characters, it only imposed stricter requirements upon *graduates*, and then with a wild precipitation, removed the few exist-

ing barriers by a total repeal of the law of 1883. And to-day, in this State of boasted progress, the most pernicious and shameful quackery runs riot without material check or molestation.

It is due our present Board of Medical Examiners to say that they are making the best possible use of the meager authority granted them, in their attempt to remove this plague-spot and protect the uninformed from the frightful impositions of ignorant and unscrupulous pretenders. But the power in them vested is too limited to meet the exigencies of the case.

Other states have made similar efforts, and with results which differ little in the main from ours.

It is high time for a more *united* effort on the part of the profession to effectually crush out this evil, and bring to justice these vampires who fatten upon the ignorance and duplicity of the public at such fearful cost of human life. Earnest, concerted action on our part can and *will* secure this end, and surely 'tis a consummation devoutly to be wished "

As a means to this end, I would suggest that the President of this Association at once appoint a committee of two or more from each of the states here represented, who shall present, through some member of their respective legislatures, either amendments or original bills embodying the following points:

First—The appointment by the Governor of a State Board of Medical Examiners, if such does not already exist.

Second—Requiring all persons doing any practice, except in their own households, to be duly registered with the clerk of the district court, on terms similar to the Minnesota law of 1883, already referred to.

Third—The appointing by the State Board of Medical Examiners of some reputable physician in each county, as medical supervisor and reporter.

Fourth—All "midwives" to be duly registered with the clerk of the district court,

and to be under the immediate supervision of some regularly graduated and *practicing* physician, to whom they shall report all cases of confinement or premature labor at which they may be present, together with all essential data pertaining thereto.

Fifth—All non-graduates to pass a satisfactory examination before the State Board of Medical Examiners, within one year from July 1st immediately following the passage of the act, or be debarred from practice until properly qualified.

Sixth—Violations of the foregoing requirements to be punishable by fine or imprisonment, or both.

These suggestions, hastily prepared, are offered in the belief that they embody no unjust requirements, and are the least that can afford relief from the present unhappy condition of medical affairs. It is hoped they will claim sufficient attention from the Association to secure any necessary revision, and when perfected, be urged forward to legal enactment.

**DEMONSTRATOR
OF ANATOMY.**

The death of Dr. John H. Larrabee caused a vacancy in

the Demonstratorship of Anatomy at the Hospital College of Medicine. There were several applicants for the place and a good deal of speculation in professional circles as to who would be the successful candidate.

At a meeting of the faculty on the 15th of December Dr. Thomas C. Evans, the First Honor man of the class of 1884, was unanimously elected. Dr. Evans is well known as the assistant editor of *PROGRESS*.

The college which selects its demonstrators and instructors from its own alumni is laying a good foundation for future prosperity, and at the same time giving the control of its affairs over to those most interested in upholding its good name. The profession of teaching medicine must be learned by patient study, and developed by experience. The professorial chair can seldom be filled by going outside the ranks of the demonstrators, lecturers or adjuncts. These are the trained teachers.

BOOKS AND PERIODICALS.

**A HANDBOOK
OF DENTAL
PATHOLOGY.**

For Students and Practitioners.

BY

ALBERT N. BLODGETT,
M. D.

Late Professor of Pathology
and Therapeutics in Bos-
ton Dental College.

Philadelphia: P. Blakiston,
Son & Co., 1012 Walnut
Street; 1888. Price \$1.75.

In his preface Dr. Blodgett offers as his apology for the publication of this work the entire absence of any text-book upon the subject of dental pathology, to which he could refer successive classes of dental students for reference or instruction. The book is intended chiefly for students.

It is a fair representation of the main facts treated of. It is burdened with apologies and explanations, whilst the language of the text is not as clear as the requirements of science would seem to demand.

At page seventy-four he says, in reference to necrosis of bone in chronic alveolar abscess: "When recovery has occurred, if this is possible, the resulting appearance of the jaw is that of a deformed and misshapen feature, and it is usually, or at least often, necessary to provide an artificial denture for that portion of the jaw which was the seat of the diseased action."

In continuing the subject, the author says: "The second way in which the disorders of the digestive system may affect the integrity of the teeth, is from the liability which such a condition of the alimentary system induces to the regurgitation of portions of the food from the stomach into the mouth."

The author speaks his mind in pretty plain terms on the exact natural alignment of dental caries. He says, page seventy-nine: "A careful microscopic examination of the interior of almost any mouth will disclose the presence of a certain parasite, called the '*leptothrix buccalis*,' in some stage of its development." It might be interesting to witness a careful microscopic examination of the interior of almost any mouth.

Speaking of inflammatory affections, the author says, page 137: "The pain from a tooth is said to be the only form of physical torture which will completely deprive the Indian of that firmness which renders him at once the admiration and the terror of all civilized people. It is the only excuse which he will himself think of offering or will receive from another for disability, without the taunt of cowardice." From this it would appear that the Indian who pleads disability from a fractured thigh, would not only be considered as offering an insufficient excuse, but he would receive the taunt of cowardice from his chief.

The whole work is written in a style which betrays an utter lack of both method in the arrangement and classification of the matter treated, and that clearness and precision in the forms of expression necessary to accurate description. Overlooking the faults as far as I may, when one deals in a scientific subject there should be some appearance of matured authorship, and it is earnestly hoped that Dr. Blodgett may at once set about the work of revision and enlargement.

THE
PHYSICIAN'S
POCKET
DAY-BOOK.

BY
C. HENRI LEONARD,
M. A., M. D.

Size, 7½ inches long, 3½ inches wide, and ⅜ of an inch thick. Bound in red morocco, for the pocket; pencil loop and flap, red edges. Price, \$1.00, postpaid. The Illustrated Medical Journal Co., Publishers, Detroit, 1888.

and new drugs; poisons and their antidotes, tried tests for urinary deposits, chemical and microscopical; obstetric calendar; disinfectants for the sick room and vaults; table of eruptive fevers, and drops in a drachm of fluid medicines.

This is the tenth year of issue of this exceedingly popular day-book, which contains several new features. Besides accommodating daily charges for thirteen months for fifty families, and the other usual memorandum pages, it has a very complete list of old

CORRESPONDENCE AND SOCIETIES.

HERNIOTOMY
AT MUNICH.

NUSSBAUM AND HIS
CLINIC.—WINCKEL.

From our special correspondent, Dr. Fayette Dunlap, of Danville, Ky. Munich, Bavaria, Nov. 21 1888.

Ten days ago I left the interesting little city of Heidelberg, not without many regrets, as each day had much valuable instruction for me. I shall long keep in memory my pleasant

sojourn there, but the allotted time had expired and I was compelled to part from my travelling companion, Dr. Parham, of New Orleans, and move on alone. We had been to the hospital daily together, and I have felt very keenly the loss of his genial companionship and no less his acute and practical observations on medical and surgical subjects.

Immediately on arriving in Munich, I went in search of Prof. Nussbaum, to whom I had letters of introduction. As you are aware, Nussbaum's name is intimately associated with German surgery for the last quarter of a century, rising particularly into prominence in the war against Austria-Hungary in 1867, and again in the Franco-Prussian struggle, three years after. He made many changes in the ambulance system, with the particulars of which I am not acquainted, but for them he gained great notoriety as well as considerable substantial recognition from his government. He is the principal authority on military surgery in his kingdom to-day. He was among the first to put into practical application the antiseptic system, and by means of his work, and particularly his excellent treatise on the subject, has done more to popularize the method than any other man in Europe.

I was received with cordiality and extended many courtesies of both a professional and personal nature. At an appointed hour I went with him through his surgical wards and carefully inspected the work in progress, with particular attention to his methods of antiseptic dressings, etc. It

was soon apparent that the theory had taken a strong grasp on him, and every detail was carried out. That morning he released a section of intestine, hopelessly strangulated in the inguinal canal, where it remained many hours and was almost at the point of gangrene. In closing this he made a large opening, carefully inspected every portion of affected intestine and returned it to the cavity. A goodly number of fine catgut sutures were now used in bringing the deeper structures together, the cutaneous surfaces held by strong silk. A drainage tube, large size, was left in the cavity. I saw this patient daily for five or six days thereafter and he made a good recovery.

Curiously enough, the next day a lad of eleven years was brought in precisely the same condition, save that the intestine showed a gangrenous spot the size of the nail of the small finger. This was carefully stitched by the Lembert suture, and when I left the boy was in excellent condition. I may here add that the temperature record was practically normal in both cases after the operation, whereas it was dangerously elevated before. There were many other operations of importance, but hardly so formidable as these, and in every one, no matter how formidable, the extremest precautions are taken to prevent infection.

The operating room is a model and painted in spotless white, and every crevice filled in so that no part is untouched by the daily cleansing to which it is submitted. You can not imagine a cleaner, whiter, purer place. The floor is of some composition as hard and smooth as marble and so arranged that it can be easily cleaned. In large jars are kept the carbolic and sublimate solutions, plainly labeled, the strength of each solution being marked prominently on the jars; a mistake can hardly be made. The instruments are beautiful to look upon, that is, from a surgical standpoint, and separated from the idea that they are to be soiled.

It is not possible to have all arrangements

nearer to the point of perfection in carrying out the details of this surgical principle. Silk and catgut are used indifferently, preference being given to catgut in the cavities.

Now to the man himself. I judge he is sixty-five years of age; very neat; clean shaven. Of late years he has been the victim of the opium habit, acquired while bed-ridden and in great suffering from fracture of both femurs. He is the subject of that condition of malnutrition whereby the proportion of earthly salts to the organic matter of the bones is lost and they readily break. The bones have united at an awkward angle, and are not strong enough to support his body, hence he goes about in an invalid chair. He is very deaf also, but regardless of these afflictions his surgical enthusiasm is not diminished and his mind is clear. His wards are daily visited and matters of surgical interest are clearly pointed out to the large class of students who gather about him. The present generation of German surgeons grant him the merited praise of bringing antiseptic surgery to its present unassailable position.

Passing on from this remarkable man, we next find one in the department of midwifery whose position on the application of this principle to his branch has gained for him an enviable renown. I refer, as you know, to Winckel. For years the mortality in the Munich maternity was very high and could not be lowered. Under Winckel's management this maternity has now the best record of any in the world, and to use his words, "it straightway began to improve with the application of antiseptic methods." The building is large, admirably arranged and conducted.

Let us now take a case from the time of entrance to dismissal. The woman is given a complete outfit of clothing, which have gone through a process of purification, and she herself is given a bath; an examination is now made (bimanual), and if possible the position of the child in utero is determined.

If faulty, the method of Braxton, Hicks and Olhausen is tried, and, I understand, generally succeeds in righting it. When labor begins, the woman is again bathed and given a large enema containing a weak disinfectant solution. The vagina is heated in the same manner *but only once*. The regulations as to who shall make vaginal examinations are specifically laid down, and young men who daily frequent the anatomical and post mortem rooms, are not even admitted to the lying-in-chamber.

The day I was there the record for the portion of the year 1888, about nine months, showed 673 confinements with not one fatal, and only in one instance had the temperature risen to 100° F. Last year the confinements were more than a thousand, and I believe without a death. This approaches perfection in dealing with what was once a stain upon all lying-in wards, a terrible mortality. In private practice, similar precautions are taken; but there is not so great a necessity, obviously for these exactions.

Prof. Winckel is the most genial and hospitable of men; speaks fluent English and takes great interest in all visitors to his wards. I greatly enjoyed his kindly, unpretending hospitality. He is in the prime of life, the picture of robust health, and one of the most active men I ever met.

The third edition of his admirable treatise on midwifery has just been issued and easily takes the lead in the German schools. Dr. Parvin, of Philadelphia, will soon bring out an English edition, and I am sure it will be popular with us. Prof. Winckel has great admiration for Prof. Lusk, and considers him the best English authority in this branch. They are fast friends, and Dr. Grayham Lusk is now in Munich, a pupil of Winckel. Prof. Parvin made him a visit last summer.

He did two vaginal hysterectomies for malignant disease of the cervix uteri. They both made prompt recoveries. The details of this method as practiced here, have already been given in a former letter and

need not be repeated. They differ in no wise from that of Martin.

Munich is a large, handsome city and generously supports these charities. The material for clinical teaching is abundant, and I know of no place in Europe that offers superior advantages to the student.

Through Von Pettenkofers influence the Kingdom of Bavaria has established a splendidly arranged Hygienic Institute, and in it he reigns supreme. He is the most eloquent and popular teacher in Germany and has given an impulse to the study of hygiene and preventive medicine.

Von Ziemssen is here, and is popular as a teacher of general medicine.

The position occupied by the faculty here in political, social, literary and scientific circles rather increases the frontier doctor's admiration for his profession. The Government has conferred upon them many honors, and by means of this they are placed before the public in a proper light. The principal distinction that the city now has is its medical school, and it is but just that this fact should receive public recognition.

At the close of the last session, a nephew of the present King, Prince Ferdinand, received the degree of M. D. and enters the surgical corps of the army.

In all scientific bodies the physicians and surgeons have taken first rank, and this encouragement impels them to further and better efforts.

Very soon I shall lay before you the observations at that Mecca of all modern doctors, Vienna.

PROFESSOR

W. A. HAMMOND.

Prof. Wm. A. Hammond, of New York, has opened a Sanita-

rium at Washington City, for the treatment of diseases of the nervous system. Before the institution was opened one hundred and twenty applications for admission were received. A suitable testimonial to the high character of its founder. Gen. Hammond is an expert in this department, and the establishment of his institution will afford him superior opportunities for classification and a more successful prosecution of his labors in neurology.

PROGRESS

A MEDICAL MAGAZINE ISSUED MONTHLY.

DUDLEY S. REYNOLDS, A. M., M. D., EDITOR.

THOMAS C. EVANS, M. D., ASSISTANT EDITOR.

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GOOD CHEER

TO ALL THE
READERS OF
PROGRESS.

A year ago, prompted by a sense of gratitude for the possession of many of the good things of this

world, the editor of PROGRESS addressed his readers in a somewhat humorous vein on the subject of punch. Carefully avoiding the expression of an opinion on the relative merits of that so long served at Ambrose's in Edinburgh Town, and its great rival which was for a quarter of a century the chief potation of the Glasgow Punch Club, preferring rather to speak of those forms which have in past years served to enliven the spirits of such scientific writers as Dr. Kitchener, Dr. Gastaldy, Father Tom, Dr. McConochie and Jim Smiley. After summing up briefly, the editor of PROGRESS timidly ventured to suggest, in a spirit of benevolence and charity, a suitable formula for a punch, designed to forever shut out from the consideration of people of good taste and discriminating judgment, the classical eggnog.

In obedience to the request of several thousand of the most intelligent readers of PROGRESS, the editor now yields his own judgment in deference to their views and reproduces the following: R Cold water, half a gallon; the juice of four lemons; one lemon, sliced thin; one pound of granu-

lated sugar; to be mixed and agitated until the sugar is dissolved. Then add one gallon of Zinfandel Claret; one pine-apple, cut into fine pieces; mix thoroughly, and whilst stirring add half a gallon of McKenna whisky; then add a pint of hot water, in which two drachms of ground mace have been steeping for half an hour, stirring in the while sufficient sugar to suit the taste. The whole to be made in a large punch bowl and served at Christmas-tide and on other holiday occasions.

Acting on this advice the Progress Punch was adopted by the Alumni Association of the Hospital College of Medicine, at its annual dinner in June, 1888. Being assured it would inspire the warmest feelings of friendship and smooth the shrivelled brow of age, Prof. Frank C. Wilson, who had never before experienced the influences of spiritual aid in a post-prandial address, grew to be the most eloquent speaker and original punster in the whole assembly, all on account of the effects of two pints of punch.

To those who may read this, and who may chance to be called upon to respond to such sentiments as are customarily announced by the symposiarch of small assemblies, the Progress Punch is suggested as the most inspiring and least hurtful of all the compounds which have hitherto been suggested for such occasions.

The regular order of proceeding described in the formula must be observed to secure the desired result. One of our readers last year made his punch without the pineapple, and not being satisfied with it, concluded to add the fruit afterward. The result was the pieces of pineapple quickly took up the whisky to saturation, and Dr. Wathen, who never drinks, came along and ate freely of the pieces left at the bottom of a glass, becoming helplessly influenced.

It is hoped no reader of PROGRESS will indulge too freely; and that, the joys of health and prosperity may be theirs for the coming year, the editor of PROGRESS most devoutly prays.

PROGRESS

A Monthly Magazine for Students and Practitioners of Medicine.

"I HOLD EVERY MAN A DEBTOR TO HIS PROFESSION; FROM THE WHICH AS MEN OF COURSE DO SEEK TO RECEIVE COUN-
TENANCE AND PROFIT, SO OUGHT THEY OF DUTY TO ENDEAVOUR THEMSELVES, BY WAY OF AMENDS, TO BE A HELP AND
ORNAMENT THEREUNTO. THIS IS PERFORMED, IN SOME DEGREE, BY THE HONEST AND LIBERAL PRACTICE OF A PROFES-
SION; WHEN MEN SHALL CARRY A RESPECT NOT TO DESCEND INTO ANY COURSE THAT IS CORRUPT AND UNWORTHY THEREOF,
AND PRESERVE THEMSELVES FREE FROM THE ABUSES WHEREWITH THE SAME PROFESSION IS NOTED TO BE INFECTED; BUT
MUCH MORE IS THIS PERFORMED, IF A MAN BE ABLE TO VISIT AND STRENGTHEN THE ROOTS AND FOUNDATION OF THE
SCIENCE ITSELF; THEREBY NOT ONLY GRACING IT IN REPUTATION AND DIGNITY, BUT ALSO AMPLIFYING IT IN PROFESSION
AND SUBSTANCE."—BACON.

VOL. III.

LOUISVILLE, KY., JANUARY, 1889.

No. 7.

GENERAL MEDICINE.

THE ETIOLOGY OF DISEASE.

BY

J. F. BARBOUR,

M. D.

Lecturer on Nervous Dis-
eases in the Hospital Col-
lege of Medicine, Louis-
ville.

Leaving out of con-
sideration the germ
theory, the etiology of
disease, as it is given
in the usual text books
on medicine, is in a
state of feeble-minded-
ness bordering upon
senile dementia. Much

of it is a survival of that period when phy-
sicians, school-teachers and theologians were
expected to be able to answer every ques-
tion that could be put to them. Much of it
does not belong under the heading of eti-
ology, but rather under that of morbid an-
atomy or symptomatology.

There is an immense deal of *post hoc, ergo
propter hoc* reasoning. Few, if any, of the
causes assigned are *causæ efficientes*—hardly
one of them can be regarded as more than
an occasional antecedent.

We find exactly the same causes given
for totally different diseases, these diseases
often occurring in the entire absence of any
of the causes mentioned, and it being the
rare exception for them to produce the dis-
ease in question.

There seems to be an indisposition on the
part of the etiologists to look matters
squarely in the face, and to take that first,
greatest and most necessary step towards
knowledge—the confession of ignorance. In
order to show the absurd and unscientific
character of this department of medicine, I

will discuss briefly most of these hypotheti-
cal causes.

Catching cold—whatever that may 'be—I
find put down by eminent authors as caus-
ing the following diseases: Membranous
croup, localization of syphilitic disease in
the larynx, laryngeal perichondritis, asthma,
whooping cough, pulmonary phthisis, angina
catarrhalis, acute gastric catarrh, peritonitis,
oöphoritis, spinal meningitis, myelitis, loco-
motor ataxia, neuralgia, chronic articular
rheumatism, rheumatoid arthritis, myalgia,
intermittent fever, cholera, dysentery, as-
cites, etc.

How simple, how satisfactory! The pa-
tient has "caught cold" in his spinal cord
and has locomotor ataxia; he has "caught
deep cold" in his chest and has pulmonary
tuberculosis!

Heredity. As was remarked by Russell
Reynolds, to say that a disease is hereditary
is simply to set back the question of its
causation one step. The reasoning which
goes to establish the existence of hereditary
predisposition is mainly of an *ex post facto*
character. A patient develops a certain
disease, *therefore* he must have had an heredi-
tary predisposition to that disease. Take
phthisis, for instance. Loomis states as the
result of his observation that hereditary pre-
disposition can be found in about eighteen
per cent. of the cases. That is to say, in
100 cases of phthisis there will be eighty-
two in which there is no heredity—in which
not even the patient's great grandmother
ever spat a teaspoonful of blood; for so zeal-

ous are the advocates of this doctrine that even an obscure history of this sort would be regarded as satisfactory evidence of the existence of an hereditary predisposition.

Taking into consideration the undoubted contagiousness of phthisis, and the fact that one-sixth of all deaths are from this cause, so that it is hardly possible to find a family of any size in which there has not been a case of phthisis, we shall be inclined, I think, to attach much less importance to the hereditary element in this disease. And yet, it is in just this disease that inherited tendency is usually supposed to be strongest. If then, we find reason to modify our views of heredity in this particular instance, how much less importance shall we attach to it in confessedly obscure cases.

Age. Age cannot, of course, of itself be a cause of anything any more than time can; therefore age cannot be accepted as a predisposing cause, unless it can be shown why it is so. Thus, advanced age predisposes to apoplexy *because* of the changes which take place in the arteries of old men. But age cannot be assigned as a cause for measles because we do not know why this disease occurs oftener in the young. Sometimes the age limits of a disease are set so far apart as to include nearly the entire human race: As when a learned author informs us that a certain disease attacks most frequently those between ten and sixty years of age.

Sex likewise cannot be regarded as a cause of disease, strictly speaking. It can only be said to produce a certain liability to disease, because of different bodily structure, etc.

Exposure to wet and cold is a cause, the effects of which have been greatly overestimated and misunderstood. To give some striking instances of this, pneumonia is unknown within the Arctic circle, and is most prevalent on the shores of the Mediterranean; it is more prevalent in our southern than in our northern states. Wet and cold do not increase the pneumonia rate. Rheumatism

is worst in the desert of Sahara, one of the driest and hottest places on earth. It is worse in Arizona and New Mexico than it is in Maine. Exposure must certainly be one of the least operative of all the causes of disease, since of the innumerable number who are exposed, an exceedingly small percentage are attacked by diseases which can be clearly shown to depend on such exposure.

Spontaneous generation. It is no more conceivable that disease should be spontaneously generated than that life should be—a fallacy that was long ago exploded by Huxley. If it were always borne in mind that when a disease is said to be idiopathic, it is simply meant that nothing definite is known as to its causation, little harm would be done. There is, however, a certain class of minds that rest satisfied with the merest shadow of an explanation, and to which such an expression as “idiopathic” is a sufficient sop. Such terms as “idiopathic,” “atmospheric,” “catalytic” and the like, stultify the spirit of investigation and are productive of lazy, loose superficial habits of thought.

Bad Hygienic Surroundings. This is one of those factors in the production of disease, a belief in the potency of which is founded upon personal prejudice rather than scientific proof. In all probability, accurate statistics would not show the difference in point of health between Congress alley and Fourth avenue, that one would naturally expect.

Etiologists, finding these various external causes so rarely operative, discovered or invented certain internal conditions, which are supposed to co-operate with the external causes in producing disease. Now, it is frankly admitted concerning most, if not all, of these “diatheses,” “predispositions” and “hereditary tendencies,” that they cannot be made out until the disease to which they are supposed to predispose comes on. Then it becomes as clear as day that the patient had a predisposition to that particular disease.

The ludicrous side of this doctrine of predisposition is shown in Niemeyer's remark that: "Every age, both sexes and all constitutions have a predisposition to malarial fever"—and likewise to death! It is necessary carefully to discriminate between private opinions—even of eminent men—and well-proven scientific facts. Some "close observer," some burning and shining light in the medical profession has a dozen cases of apoplexy, occurring in short-necked, thick-set, red-faced men. He immediately announces in his brilliant way to his colleagues that he has discovered the apoplectic build. Each of them remembers having seen just such cases, he doesn't remember just how many. Then the hypothesis gets into the books. The next generation of book-makers copies it, and it gets accepted as a scientific fact. Finally, along comes the meek and lowly statistician, who has no hypothesis to establish, whose sole duty is simply to record facts as they are, and, wonderful to relate, he discovers that more tall, lean, pale men have apoplectic strokes than of the opposite sort. Coral insects are very insignificant creatures when compared with whales. They cannot lash the waves with their tails nor blow water through their nostrils to the delectation of all beholders; but they accomplish a good deal more in the long run.

So long as traditional views are accepted unquestioningly, so long as every antecedent is accepted as a possible cause, so long as undue importance is attached to the private opinions of other men, just so long shall we find such absurdities in etiology as Niemeyer exemplifies in his account of locomotor ataxia. He assigns as the causes of this disease, excessive venery, catching cold and checking the perspiration of the feet! If any or all the causes stated were even in a remote degree responsible, verily, the tabetics ought to be as numerous as the seed of Abraham.

"Test all things, hold fast to that which is good, eschew that which is evil."

GENERAL SURGERY.

LAPAROTOMY FOR INJURY BY A CIRCULAR SAW.

BY

DR. JOHN H. PACKARD.

Read to the Philadelphia
County Medical Society.
Stated meeting, Decem-
ber 12, 1888.

Charles Brown, aged twelve years, was brought to the Pennsylvania Hospital, September 24, 1888, having fallen against a circular saw in rapid motion. The accident occurred

about one mile from the hospital.

On his admission, the ascending colon and about two feet of the small intestine were protruding from a wound four inches or more in length, nearly vertical, on the right side of the belly, some two inches from the middle line. The mass was tightly grasped in the wound, so that access of air to the peritoneal cavity was prevented. The boy was in a condition of marked but not excessive collapse.

He was etherized, and the parts antiseptically cleansed. The bowel was then carefully examined. Three wounds of the intestinal wall were detected: one involving the entire thickness, the other two the peritoneal coat only. At several points the omentum had been wounded, and the mesentery was cut in two places. The boy's woollen clothing had been torn by the teeth of the saw, and a great many minute shreds of the stuff deposited on the surface of the protruded mass.

The three intestinal wounds were carefully sutured with very fine silk, after the method of Lembert. All the bleeding points were secured with fine carbolized catgut. Some ragged portions of omentum were similarly tied and cut off. Attention was next given to the cleansing of the peritoneal surface from all the bits of woollen threads deposited on it; a very tedious process, occupying more time than any other part of the operation.

In order to return the protruded mass it was necessary to enlarge the wound some-

what; after which reduction was accomplished without difficulty. After irrigation of the peritoneal cavity, the edges of the wound were brought together with silk-worm-gut sutures, secured by shot. A glass drainage tube with a closed and rounded end was inserted, and the usual antiseptic dressings applied, with a flannel over all.

Every two hours the cotton rope filling the tube was removed, and suction was made with a hard-rubber syringe with a long nozzle, so as to prevent any accumulation of secretions.

Reaction took place very favorably; the boy had only very slight pain, but some nausea and vomiting.

The nausea and vomiting continued all next day, subsiding toward evening. A free movement of the bowels occurred, and I learned later that an attendant, just after the boy's admission, had given him by mistake ten grains of blue mass, intended for another patient. As soon as the stomach became quiet, the administration of prepared milk and beef-tea, alternately every every two hours, was begun.

On the 28th (the fourth day) there was only a slight yellowish discharge from the tube.

29th. The glass tube was removed, and a soft rubber one substituted for it. Solid food (milk toast) was given.

30th. He ate an egg and some chicken-broth.

A day or two after this the tube was removed, and a few days later the sutures.

For some two weeks after this the boy was kept in bed; he was allowed first to sit up in bed, and then to get up and walk about.

On October 31st, thirty-seven days after the injury, he walked into the clinic-room; and on November 12th he was discharged, with directions to wear a binder for some time, and to report to us before dispensing with it.

I should have mentioned that, after the spontaneous movement of the bowels on the

second day, an enema of turpentine and sweet oil was administered about every third day until his dismissal.

Certain features of this case may be briefly commented upon. The boy's youth was, of course, in his favor. He was stout and healthy, although his surroundings had not been, by any means, hygienic. But there was one circumstance of special advantage—the fact that the protruded mass quite filled up and plugged the wound in the abdominal wall. Besides this, the wounds were all of small extent, and no large vessels were divided. The presence of the almost innumerable shreds of soiled woollen clothing on the peritoneal surface was of course an element of danger, only to be set aside by the utmost care and patience in their detection and removal.

It would scarcely be fair to conclude this report without acknowledging the assiduous care and attention, and the skill in manipulation bestowed upon the case by Dr. Walter D. Green, the resident surgeon, who first had charge of it, as well as by his successor, Dr. Harvey Shoemaker. Much of the credit of the favorable result attained belongs fairly to these gentlemen.

[The patient was shown to the Society and examined by the members.]

DISCUSSION.

Dr. Joseph Price:

The fact that the protruding intestine completely closed the wound had a great deal to do with the successful result in this case. We know that undue manipulation and prolonged and needless exposure of intestine are frequent causes of shock and death as this fact is beautifully illustrated in needlessly prolonged operations. I never could understand the vicious do-nothing policy of ambulance surgeons in these cases of abdominal incised wounds. The ambulance surgeon should be prepared and instructed to act promptly in such accidents. Promptitude is everything. A pitcher of warm water and a few threads might save lives that are lost

by carrying the patient untreated, with the intestines exposed, covered by filthy clothing to the distant hospital, there to wait for the chief to arrive before anything is done.

I recently read of a case of a man who was accidentally eviscerated while hunting alone in the backwoods. Some one found him with the intestines protruding and covered with dirt, and carried him to the nearest brook, washed and sewed him up. He was also fortunate in *being away from opium* and from meddlesome nurses and officious residents of a general hospital, and he recovered. The strictest simplicity, absence of opium and of milk, indeed of all food till the patient asks for it, except in greatly exhausted cases demanding early support or stimulation, will give the happiest results.

I give plenty of fluids, toast water, barley water, stimulating enemata of beef-tea, with perhaps, a little whisky if needed, and enemata of water to relieve thirst.

We know how difficult it is to prevent hemorrhage in ether nausea. Careful preparation for the operation by the free use of salines will minimize the ether and bowel disturbance. I am satisfied that the free use of the salines is of greater importance *before* operation than after in abdominal work. The unintentional administration of blue mass in this case of Dr. Packard's was a happy accident and helped recovery.

I wish particularly to congratulate Dr. Packard upon the excellence of the toilet, the care to secure perfect cleanliness under such difficult conditions, and the perfect drainage. The careful removal of all foreign material from the bowel, free irrigation, and perfect glass drainage in two desperate cases has given him a triumph in two cases of abdominal work.

Dr. Packard: I must say a word in reply to Dr. Price in defence of "my friend opium." You remove a tumor; all goes well until water is injected into the abdomen. Pain ensues immediately. You

give a grain of the extract of opium by the rectum, when the pain disappears, the patient goes to sleep and wakes in comfort. Are you not justified in attributing this to the opium, and relying upon the same measure in similar cases?

Of course it would be a great mistake to treat all cases of peritonitis with opium. The saline treatment is proper in suitable cases, and saves many lives. So may we say of opium in suitable cases. The error is in exclusiveness, whether in the one direction or the other. We must use our judgment in individual cases, and prescribe in view of all the conditions present.

In this case I think nothing would have served my patient as the one grain of the extract of opium did. It was not a case of peritonitis however, and I did not so regard it. But suppose some enthusiast in salines had ticketed the case peritonitis and immediately administered purges, I hardly think such prompt relief would have been afforded.

I would like, while on this subject, to mention a measure which I have employed for many years, and which has repeatedly seemed to me to avert threatened peritonitis, and that is the application of a dozen leeches to the abdomen. After operation for stone especially, as well as in other cases of traumatism, marked benefit has been derived from the adoption of this plan.

TIN CANS

AND FOIL.

The danger of preserving fruits and vegetables in tin cans, and of wrapping chocolate, confectionery, dried fruits, and cheese in what appears to be tin foil, has grown so great that the French Government now prohibits the use of any composition of tin, for these purposes, which is not known to contain ninety per cent. of tin. The material ordinarily used as a coating for the so called tin vessels, as well as the foil in general use, contains so large a proportion of lead as to become a source of danger from the presence of various acids acting upon the lea

CARCINOMA OF THE BREAST.

BY

SAMUEL W. GROSS,

M. D.,

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of Surgery and Clinical
Surgery in the Jefferson
Medical College of Phila-
delphia.*

Read to the Philadelphia
County Medical Society,
Stated Meeting, Septem-
ber 26, 1888.

Of operations which do not rank with major procedures, not one is more commonly practised by men not skilled in the manual of surgery than that of the removal of the mammary gland for carcinoma. The superficial situation of the organ, the ease with which hemor-
rhage is controlled,

shown, from an impartial examination of a large number of cases that the knife not only prevents the local dissemination of the disease, its extension to the lymphatic glands, and the occurrence of secondary growths in a large percentage of cases, but that it moreover prolongs life, and definitely cures one patient out of every eight and a half.

An operation in a suitable case having been decided upon, the one selected by the majority of surgeons is that with which we are all so familiar, namely, the inclusion of the nipple and a portion of the skin in two elliptical incisions, the reflection of the flaps, and the dissection of the gland from the surrounding tissues. Other surgeons, actuated by the desire to save as much of the gland as possible, limit their efforts to the extirpation of the tumor alone. The first of these procedures is faulty enough; the latter cannot be condemned in too severe terms; and yet, in his recent monograph on "The Operative Surgery of Malignant Disease," Butlin, I am sorry to say, recommends it. A knowledge of the changes which, starting from the tumor itself, ensue in the remainder of the breast, in the adjacent soft tissues, and in the associated lymphatic glands, which changes indicate the local extension of the disease along the lymph paths, ought surely to lead the surgeon to reject such irrational operations. In very exceptional instances a cure may be effected; but we all know what is the common result—a more or less rapid recurrence of the disease—a favorable issue being so uncommon after these incomplete operations that few, if any, of us have ever witnessed it.

Dissatisfaction with my own earlier results and those which I was enabled to follow in the practice of other surgeons led me, ten years ago, to adopt a radical procedure, the object being to effect riddance of all the tissues in which the experience of hundreds of years demonstrates that recurrence, or a new outbreak of the disease, takes place. Hence, in my operation, which is minutely

the flaps are united, and the dressings applied, all tend to make partial or complete extirpation of the breast a tempting field for the young surgeon. If to these considerations be added the great frequency of the disease, it will be seen that its treatment should constitute an instructive topic for consideration and discussion by this body.

In accepting your invitation, Mr. President, to make the opening remarks upon the subject, I take it that a brief narration of my own personal experience will prove to be more interesting than were I to deal with the practice of others, the more especially as the operation which I have performed is more thorough than the usual procedure.

At the outset I will state that in the management of so lethal an affection I have relied upon the scalpel, as I believe it to be the one and only measure which is capable of affording good results. It may be that some of my hearers are sceptical as to the propriety of interference. The old tradition that carcinoma is an outward evidence of a blood disorder, and that it cannot, consequently, be cured by operation, may still influence a few of our members. To these I may be permitted to say, first, that the leading minds of the world now admit that carcinoma is primarily a local growth; and, secondly, as I have elsewhere¹ conclusively

¹ American Journal of the Medical Sciences for April 1888.

described in the *American Journal of the Medical Sciences* for April, 1888, I amputate by a circular cut, the entire breast with its overlying skin and fat, dissect off the pectoral fascia, and carry an incision into the axilla, through which I am enabled to extirpate its contents. If nodules should be found in the pectoral or intercostal muscles, they are also removed with an equally unsparing hand. The edges of the wounds are then approximated, the closure of the breast incision being greatly facilitated by raising the flaps from the subjacent tissues for an inch and a half to two inches, and the employment of button sutures. In some cases, the wound cannot be entirely united, so that it has to heal by the process of granulation.

In the discussion which will follow the reading of my paper, I will doubtless be asked, first, Why do you remove the entire breast and its surrounding tissues? and, secondly, Why do you attack the axilla in all cases? My answer is, simply because recurrence, or a new outbreak of the disease, ensues in tissues which are left behind in the less radical modes of operating. The accumulated observations of surgeons show that recurrence may be anticipated in the skin and subcutaneous tissues, especially at or near the cicatrice; in the fascia covering the pectoral muscle; in the remnant of the breast from which the tumor alone was excised; in outlying lobules which were overlooked during the performance of the less complete operations, and in the lymphatic glands, particularly those of the axilla.

Answering these questions more fully, I would say that sound pathology, as well as experience, demands that the entire mammary gland along with its circumjacent tissues should be amputated, first, because we have to deal with a carcinomatous degeneration commencing at one point, from which the cells migrate in various directions into the remainder of the breast and the surrounding tissues, the extent of which migration into the lymphatics and their radicles

it is impossible to determine with the naked eye; secondly, because the disease is sometimes multiple, and the smaller growths are only detected on examining the breast after its removal; thirdly, because minute lobules frequently lie at some distance from the main body of the gland, particularly toward the axilla and the clavicle, which may subsequently become the seat of a new outbreak, even as late as ten years, as in a remarkable instance recorded by Banks; and, fourthly, because nodules may be found in the subcutaneous tissues at a relatively great distance from the breast, which would certainly have escaped detection in the lesser operations.

My answer to the second question, Why do you attack the axilla in every case? is because the axillary glands are almost always diseased, even though they cannot be felt prior to operation. Of my forty-five cases, the glands were not palpable in eighteen, but in fifteen of these they were present when the axillary space was opened. In fifty-seven out of sixty-five similar cases, Kuester found that the glands were infected, so that our combined experience demonstrates that the glands are invaded in eighty-six out of every one hundred cases in which there is no external evidence of their implication. Hence, if the axilla be not evacuated of its contents in every case, a subsequent operation will almost surely be demanded. In point of fact, I consider this step as the keynote of the procedure, and I refuse to operate if I am not permitted to have my own way in this regard.

Although the procedure which I have described may appear to be unnecessarily severe as to the sacrifice of tissue, and, at first sight, seem to be attended with more risk than operations performed with a more sparing hand, I have still to present some facts which conclusively show that it is the best that has as yet been practiced as regards mortality, freedom from recurrence and a final cure.

Of my forty-five cases two, or 4.44 per

cent., perished from the operation, and five patients were lost sight of after recovery. Deducting the seven that died and could not be traced, thirty eight cases show local recurrence in eleven or 28.95 per cent. Including the deaths, out of forty cases, nine, or 22.5 per cent., recovered. Of these one died of an intercurrent disease in seven years and ten months, while the remainder are still doing well, one for nine years and ten months, one for nine years and one month, one for six years and nine months, one for four years and three months, one for three years and eleven months, two for three years and six months, and one for three years and five days.

Let us contrast these results with those afforded by the next best operation, namely the removal of the breast by flaps and the evacuation of the contents of the axilla in every case. Of 328 cases of this description in the hands of Banks, Kuester and von Bergmann, 10.67 per cent. perished, there was local recurrence in 54.92 per cent. and 15.15 per cent. were cured, so that my operation is safer by 6.23 per cent., is less liable to local recurrence by 25.97 per cent. and affords 7.35 per cent. more of permanent recoveries.

It is quite certain that the greater immunity from local reproduction of the disease in my operation is due to the total amputation of the breast, its skin and enveloping fat. Despite the fact that my results are better than any that have heretofore been recorded, a careful examination of the cases of Banks shows that he met with only 3.88 per cent. more of recurrences than I have, and that his percentage of recoveries, namely 20.77, is only 1.73 per cent. less than my own. Hence, I felt that I might possibly have sacrificed too much of the skin, and since June, 1887, I have so far modified my operation in ten cases, the skin in none being apparently affected, as to save enough of that structure to admit of nice approximation of the edges of the wound. All recovered from the operation,

one died from recurrence in the axilla and metastasis, one is living with axillary reproduction; in not one has there been local reproduction; one patient is free from disease at the end of fifteen months, one for one year, one for nine months, and the remainder for periods varying between three and eight months. These cases can be followed and whenever I am sure of being able to trace my patients, I shall give this procedure a fair trial. When, on the other hand, the patient lives at a great distance, or her circumstances are such as to prevent her visiting me in the event of recurrence, I will adhere to the more extensive operation.

DISCUSSION.

Dr. James Collins: I have on two or three occasions, in the case of small tumors in comparatively young women, allowed myself to be overruled by the patient and her friends, who urged that it would be a pity to sacrifice so much of the breast as I proposed, to performing a restricted operation; but I have regretted it in every instance, and I can assure Prof. Gross that I will never offend again. That which Dr. Gross describes as the "second-best operation," the large elliptical incision with thorough removal of tissues beneath the skin and exploration of the axilla, is the one I have practiced in the majority of my cases. The prolongation of life in those I have been able to follow would average not quite three years.

The great difficulty we have to contend with in mammary tumors is to secure consent to an early operation. Patients go from surgeon to surgeon, and from city to city, and finally yield consent as a last resort or in deference to an authoritative opinion; usually too late to escape recurrence. The recurrence which then takes place, despite skillful operation by a distinguished hand, will be cited in discouragement of timely operation in other cases, by a large circle of relatives and friends.

The exploration of the axilla, which the

lecturer in his masterly demonstration has so justly emphasized, should never be omitted. Nor is it too trite a remark to recall that antiseptic methods, which have so improved the results of extended operations, should here also remove any lingering dread of opening up large spaces; for they have improved the outlook of the procedure by assisting the rapidity of healing and excluding the danger of septic accidents and sequelæ.

Dr. O. H. Allis: I have nothing to add in discussion; I have repeatedly seen Prof. Gross operate, and there is one point in his method of operation to which I would call especial attention. The breast having been covered for twenty-four hours with antiseptic solutions and his hands being thoroughly aseptic, he carefully palpates the pectoral region for outlying nodules, marking the site of any that he finds with a pencil stroke, and when he operates he does not dissect out these places, but includes them well within the sweep of the line of incision; in other words, he cuts beyond the outer limits of the disease.

Dr. John B. Roberts: Dr. Gross has for many years taught us all the proper way to remove a breast, that is, to remove it thoroughly. In my own operations I have, whenever possible, employed the large elliptical incision; the advantage, and I confess the only one, being that when approximation of the edges of the wound is at all possible, it can by this method be more readily affected. No one who has learned from Prof. Gross the proper way to open the axilla, would dare to neglect this portion of the operation. As to aseptic and antiseptic methods, there can be no difference of opinion among experienced operators; they are the only methods permissible in operative surgery. I would like to ask Dr. Gross how long it takes to repair one of the large spaces in what he calls the dinner-plate incision, and what his opinion would be as to the prospects of a plastic operation to aid in hastening healing.

Dr. R. Bruce Burns: Of all surgical cases these are the most unsatisfactory. In my earliest operations I did not open the axilla. Three cases operated on in this way are living for eleven, nine and five years respectively. Of later years I have opened the axilla and have been unfortunate. Recurrence has taken place in the cicatrices and even in the axillary tissues, perhaps in small glands not removed. I have thought perhaps it recurred in the adipose tissues. I have usually employed the elliptical incision. The method of leaving a large open wound to heal by granulation is rather hazardous. In all cases where I have had to depend upon extensive granulation there has been rapid recurrence and metastasis. There may also be limitations of the movements of the arm from **matting of the tissues**. It is wise always to attempt to secure union by first intention. It would be well to attempt to remove outlying nodules in the surrounding tissues. Where nodules occupy a portion of the gland (mammary) and are intimately attached to it, the whole organ should be removed.

Antiseptic measures are only so far useful as, in arranging them, you secure aseptic conditions. I believe thorough cleanliness in all respects, as to instruments, dressings, and the surgeon's hands, with good drainage, is all that is necessary in the treatment of the wounds of operations.

Dr. Gross, in closing the discussion, said: There are many points which might have been touched upon in the paper which I omitted for the sake of brevity. Societies do not like to listen to long papers, and the best speakers teach little in long papers. The points I have tried to emphasize are the importance of a thorough operation and the fact that its results are better than those of incomplete operations.

Now, as to primary union. Of course, I want to get primary union whenever I can. Those who have never seen my operation would be surprised to see how close an approximation we can get by sliding the bis-

toury under the skin, say for from one to two inches, and then drawing the loosened flaps together with button sutures.

Sometimes when there has been very extensive disease, necessitating correspondingly extensive operation, we have a gap left to granulate of two or three finger's breadth—never more than three finger's breadth. Healing may be slow in a debilitated subject with a large wound, but averages about six weeks.

Now as to saving the breast and removing only the tumor itself—I do not care for the breast. "It is of no use. I am concerned in getting rid of all diseased tissues. What surgeon would undertake to remove a sarcoma of the thigh, for example, and for the sake of leaving a little more stump, make his flaps through infiltrated tissue? I should consider such a procedure criminal. Yet it is just what some surgeons want us to do in the breast.

In my last ten cases I did, for reasons stated in the paper, the lesser operation, and if I find it equally satisfactory in the end, I will adopt it altogether. I am not wedded to one operation, only so far as not only personal experience, but the combined statistics of several operators with good results show that my operation has given the best results.

Dr. Burns has had an experience of coincidences. In the cases in which he did not open the axilla and recovery took place, he had a free axilla. I judge that the doctor thinks recurrence takes place in granulations. Now it is a histological fact that granulation tissue will give rise to granulation tissue alone, and not to epithelial tissue. The granulating surface may be great or small; that has nothing at all to do with recurrence. In those other cases all the disease was not removed, and hence development again took place in the tissues forming the bond of union, or the tissues near the cicatrice.

As to aseptic surgery, I can only say that if any one has been taught the modern methods and neglects them, and death results from erysipelas, pyæmia or septic complication, he cannot be held irresponsible.

EARLY DIAGNOSIS OF HIP DISEASE.

BY

J. T. FREELAND,

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The term hip disease, as applied to ostitis of the coxofemoral articulation, is a misnomer. There are many diseases of the hip, and when we apply the general term to one of them we ignore

a number of other important maladies of this region.

The fact that ostitis of the bones, entering into this articulation, is called hip disease is no doubt the cause of many blunders in diagnosis of diseases in this region.

The name implies that there is one disease of this joint, and physicians of small experience in joint diseases, when meeting with any disease which manifests any of the symptoms of ostitis of the hip, readily jump at the diagnosis of hip disease. The truth is that all affections of the hip present some symptoms in common, and a physician who prides himself on his ability to diagnosticate diseases must be constantly on his guard where diseases of this articulation are concerned.

The hip joint, deeply seated and united by powerful ligaments and covered by heavy muscles, is more difficult of examination than any other joints with which we have to deal. There is no difficulty as a rule in making a diagnosis of hip disease (I use the common term) during the third stage, for then the deformity is so characteristic that the laity ordinarily recognize it. But during the first and second stages the diagnosis is sometimes extremely difficult, and when making that diagnosis the following diseases and injuries must be considered: Bruises, sprains, rheumatism, sciatica, congenital dislocation, infantile paralysis, periarthritic abscesses, pelvic abscesses from Pott's disease.

Bruises obtained from severe falls in which the patient strikes on the hip, will sometimes produce severe contusion of the gluteal region, and long after the ecchymosis

has passed away there will remain soreness in the muscles and their sheaths, which is greatly augmented on motion. The diagnosis of these cases is quite puzzling until the histories are obtained.

Parents generally trace the origin of hip disease in their children back to an injury received in a fall, but in such cases the lameness has gradually increased from the date on which the injury was said to have been received. But in contusion of the hip the lameness and pain are greatest immediately after the injury, and instead of growing worse, they gradually and sometimes rapidly improve after the date of the injury. Further, in bruises of the hip the leg corresponding to the injured hip is either the same in size as its fellow, or is swollen as a result of the injury. In hip disease atrophy of the leg is early marked. In bruises of the hip the pain is always confined to the involved muscles. In hip disease the pain is generally referred to the inside of the knee. In bruises of the hip we get no history of the peculiar ostitic cry at night, that is generally heard from patients suffering with hip disease. In bruises of the hip the pain is constant, while in hip disease it is intermitting.

I remember the case of a child which was brought to me, that had fallen from the balcony of a tenement house to the street. I saw the child one week after the fall. The symptoms were very much like those of hip disease. The patient was only three years old and the symptoms were subjective. Had I not obtained a history of the injury, I would have made a diagnosis of acute hip disease in the first stage, although atrophy was wanting.

The symptoms in sprains are very much the same as those of bruises, but are more obscure, there being no external evidences of injury. To make a diagnosis of these cases a history of the injury is necessary. The patient, it will be found, has fallen in such a way as to forcibly adduct abduct flex or extend the leg to an extreme degree.

The symptoms and results are about the same as those of bruises, except that they are more lasting.

Cases of monarticular rheumatism of children are quite rare. I have seen several in which the hip joint was the seat of trouble. The diagnosis of these cases is quite puzzling, for we may have in them atrophy lameness and chronicity. In these respects it resembles hip disease. Generally, there will be found in these cases a rheumatic family history. It is invariably found that these patients suffer most during damp, rainy weather. The increased severity of symptoms at irregular periods might be mistaken by the physician for exacerbations of hip disease. It may be necessary to watch these cases for a while, in order to test the value of salicylates and to see if lengthening or flexion will occur before an absolute diagnosis can be given.

There are cases in which sciatica and hip disease might be confounded, in which the pain is greatest at the exit of the sciatic nerve, from the pelvis, where there is marked pain on motion, where it is necessary to hold the leg in flexion to lessen pain by taking the tension from the sciatic nerve, and where the nutrition of the limb has been interfered with by a bad nerve supply, resulting in atrophy. In such cases, sciatica and hip disease may simulate each other in such a way as to puzzle an expert. In distinguishing between them under these circumstances we must bear in mind that the pain of hip disease would not be so severe as the pain of a sciatica. There would be no pain at the inner condyle in sciatica, as is usually found in hip disease. The pain in hip disease is a starting pain, especially at night, which causes the patient to scream and then subsides before he awakens. The pain in sciatica has no such characteristics. We will not find the characteristic exacerbations of pain and inflammation in sciatica that we find in hip disease.

I once had a patient brought to me, suffering with unilateral congenital dislocation

of the hip, in which a diagnosis had been made of hip disease. The symptoms which are coincident in these affections are lameness, shortening and atrophy. The lameness and shortening differ so widely in the two diseases that no one should confound them. The lameness is without the characteristic stiffness of the limp of hip disease. The shortening is first noticed when the child begins to walk and is not preceded by pain nor lengthening.

In hip disease, where there has been dislocation following absorption of the head and neck of the femur, ankylosis has almost invariably taken place between the upper end of the femur and the pelvis; while in congenital dislocation there is great freedom of movement of the head of the femur. When a child with this affection is placed on its back the head of the femur can be moved up and down over the side of the pelvis for a distance of from one to three inches. The limp in hip disease of the first stages has an element of stiffness and the limb is favored, showing that there is tenderness in the joint. The limp of congenital dislocation is a limp with an element of looseness as the head of the femur glides up and down over the pelvis at each step.

Infantile paralysis of the hip muscles is commonly mistaken for hip disease. The symptoms that are found, both in hip disease and infantile paralysis, are persistent lameness and atrophy. There is no stiffness in the lameness of infantile paralysis, neither is there fixation of the hip. The limp is seen to be from lack of muscular power rather than a favoring of the limb on account of joint tenderness. The atrophy is in proportion to the amount of lameness and is accompanied by a low temperature of the affected muscles. There is no resistance to flexion or abduction in infantile paralysis. It is also unaccompanied by pain and is not progressive.

On the contrary, hip disease is a very painful malady. There is early resistance

to flexion and abduction; and the disease is progressive.

Some cases of periarthritic abscesses resemble hip disease, as they are accompanied by pain and resistance to motion of the leg. The pain, however, in periarthritis is constant. The position of fixation depends entirely upon the group of muscles contiguous to the abscess, the leg being placed in such position as to relax the muscles passing over the diseased area. Sometimes it is necessary to keep cases of penarthritic abscesses under observation for some weeks before a diagnosis can be made.

Pelvis abscesses from Pott's disease produce symptoms much like those resulting from hip disease. The flexion caused by the irritation of the pelvis and ilium muscles by burrowing pus, will produce the same deformity exactly as that which is found in hip disease in the third stage, viz: flexion, adduction and fixation. Of course, when the kyphos is prominent on the spine no one would hesitate in making a correct diagnosis, but in those cases where the kyphos is small or totally absent and where a good history could not be obtained, a correct diagnosis could not be made without an examination as to the flexibility and length of the spine.

In making a diagnosis of hip disease, we cannot depend on the symptom of lameness, for all the affections I have named are accompanied by lameness. We cannot depend on atrophy, for that is found in conjunctive infantile paralysis, congenital dislocation, rheumatism and pelvis abscesses. We cannot depend on flexion, for that is a symptom of periarthritic abscesses, pelvis abscesses and sciatica.

I have seen professors of surgery—one in a New York post graduate school and one in a Western school—place a child on his back with his lumbar spine touching the table, and because he could not press the popliteal space of the affected limb to the table, without making the child arch the spine, the case was said to be one of hip

disease. The test was not a true test. In making a diagnosis of this disease we must have, first, a careful history showing slight lameness in the morning, wearing off as the day progresses—the affected hip easily tiring when the child is at play; pain referred to the knee—rarely to the digital fossa. The patient will, at this stage, scream out sharply in the night without waking—a peculiar, sharp cry which, when once heard, will not be forgotten. For some days or weeks all symptoms may disappear and then may come on with redoubled intensity. As soon as the most vague symptoms appear, there will be resistance to extreme flexion or adduction—the resistance to adduction is the most reliable early symptom of muscular spasm—from this, the first stage, the disease passes in a few weeks to the stage of shortening, then after a variable period to the stage of lengthening with flexion.

<p>DESTROYED . BY FIRE.</p>	<p>The great jobbing house of the Richardson Drug Co., of St. Louis, was destroyed by fire on the evening of December 31. This establishment was the largest of the kind in the world, the firm being made up of Mr. James Richardson and his two sons, Mr. L. H. Cress, and Mr. John H. Moffitt. It is said the pay roll of the firm embraced two hundred and two names.</p>
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The loss is estimated at more than seven hundred thousand dollars, exclusive of the building, which alone cost the firm fifty thousand dollars. The insurance it is said will amount to seven hundred and fifty thousand dollars. It is reported the night watchman perished in the flames. It is said to be the intention of the company not to rebuild. The firm announces an arrangement with Meyer Bros. & Co., to execute all of its orders, and requests that friends and patrons correspond with them relative to all new business. The closing up of the business will therefore make no difference to either the traveling agents or their customers, both being supplied by the successors, Messrs. Meyer Bros. & Co.

EYE, EAR AND THROAT.

ALBUMINURIC
RETINITIS.

BY
WM. DICKINSON,
M. D.,
ST. LOUIS.

Read to the Mississippi
Valley Medical Association,
at St. Louis, Sept.
25, 1888.

Mrs. A. B., residing in the country, presented herself June 11 for examination, having the following history, viz.: Is forty years of age, of medium size and stature; hair and complexion light; irides of gray color; the mother of

several children, the youngest being fifteen years of age; general health uniformly good, never subject to headaches. Seven years since she had a protracted sickness of seven weeks, not recognized as rheumatism, but from that time my heart has given me trouble and have experienced some palpitation and a smothering sensation after a quick effort or violent exercise; have had at times considerable pain in shoulders and arms, and when present the abnormal action of the heart seems increased; pulsation now irregular; during the last two years catamenia occasionally suspended, but their return not delayed beyond two intervals; appetite generally good, as also habitual condition of the bowels.

On a certain morning in February last, while in the enjoyment of usual health, and without assignable cause, immediately upon rising from bed, observed dimness of vision with the *left* eye. This obscurity diminished during the day, but the next morning it returned to a degree greater than the day before, and interfered with vision with the right, which was still unaffected. This obscurity rapidly increased till in a few days I was unable with it to discern the features of friends. In this condition it has remained till this time, about four months. Vision with the right eye continued unimpaired till May 26, when about eleven o'clock A. M., while engaged in usual domestic duties, I experienced a very funny sensation in the *right* eye. This, however,

for the most part, passed off in about a half hour, and during the afternoon I felt as well as usual. But upon rising from the table at early supper a sudden blindness came over me unaccompanied by pain. I wondered if I was about to faint. All objects became obscure and as if seen in twilight. I bathed my face with camphor and sent for the doctor. The eye was then bound up and remained till the third day thereafter, when upon removing the bandage I discovered I was entirely blind with the right eye. On June 7, I carefully tested its power of vision and ascertained I could then discern light and very obscurely the outlines of large objects, and can now discern only a large black letter four inches in diameter at five inches distant. No glass renders any assistance. Urine scanty in quantity, not exceeding a pint in twenty-four hours."

I learned by inquiry that a sediment is deposited, but its nature could not be intelligently ascertained, nor was it practicable to procure a specimen for examination (as the patient soon left the city for home) and a request to express it had not been complied with.

By ophthalmological examination I ascertain that all the dioptric media are clear and normal, except a thin segment of the vitreous posteriorly, in consequence of which a slightly hazy appearance is given to the details of the fundus; the vessels of both are in a state of congestion; many of the smaller are obliterated, others interrupted; numerous hemorrhagic effusions are seen throughout the fundus; these assume divers shapes, e. g., splashes, or elongated effusions, or brush-like in form indicating proximity to and in the direction of the normal vessels; patches of white dots in formless aggregations, or assuming more or less a sellate arrangement. This is the result of fatty degeneration of the connective tissue of the retina. The appearances of the fundus of each eye are similar, but the left is affected to a less degree than the right.

TREATMENT.—Addressing therapeutics to

the original and parent disease, I ordered iron and arsenic (effervescent salt of Keasley and Matterson) in full doses. R Digitalis fifteen to twenty drops three times a day; vegetable diuretics freely; tepid baths; hot applications over lumbar region at night. pot. iod.; nutritious diet, rest, avoidance of all hurtful influences. These in proper alternation, succession or in combination.

On 8th inst. (Sept.) the husband writes: Took wife to Dr. Holmes, Chicago. She had derived some benefit from treatment. On August 31st was suddenly seized with severe pain in right eye and right side of face, and from that time till 9th the pain was excruciating; eye ball is as red as fire; no drops have been put into the eye; just now she is comparatively easy, though a dull aching pain persists in the eye; he begs to know "what must be done;" she is too weak to go to the city.

Of course I advised that I should see her, but for the present I prescribed atropine for the eye, and the energetic use of mercurials till the specific effect was perceived. I have heard nothing farther.

In reference to the case narrated I beg leave to submit a few practical observations:

Inflammation of the retina, though generally occurring from palpable causes, may yet arise from causes that defy unequivocal detection; it may be limited to the retina alone, but more frequently it is complicated with a like affection of other structures contiguous, or with those having anatomical relations with the retina. It is associated as a consequence with only *one* specific affection, viz., syphilis, which has become constitutional. But the origin and existence of albuminuric retinitis is wholly exceptional and unique, it being the sequel of a disease of but one organ, and the sequel of only one form (or allied forms) of disease of that one organ and that which is characterized by albuminuria. The final result of this distinctive retinitis is greatly *impaired vision*, and may be blindness. The association of amblyopia, formerly termed *amaurosis*, with

Bright's Disease, had been recognized and its relation as effects cause conjectured long before the introduction of the ophthalmoscope, but in recent times ophthalmologists and pathologists have demonstrated beyond question this mutual relationship and dependence.

The primal cause or causes which produce that pathological state of the kidney which determines the excretion of albumen in the urine are as yet unknown. It has been attributed to certain changes in the blood effected by antecedent causes, to abnormal conditions of the cavities of the heart, to changes in the substance of the kidney, or in the epithelium of the glomeruli, and to constriction of its vessels. Of these factors, some one, perhaps two or more combined may be the cause of another or of others, and at the same time all be the result of a more general efficient cause. In this disease it is known that the blood is altered in its chemical constituents, is deficient in its solid elements whereby the serous portions are proportionately increased. Of the causes of Bright's diseases, more or less hypothetically assigned, it is probable that that which attributes it to morbid conditions of the epithelium of the glomeruli and the tubuli uriniferi will ultimately prevail, the resulting state allowing the transmission of albumen of the blood together with the normal constituents of the urine. The function of the vaso-motor of the great sympathetic (the only nerve distributed to the kidney) by some unknown overwhelming influence being lost, the inhibitory power, the great balance-wheel, is also lost, and consequently exasmosis of abnormal constituents from the blood takes place. As in cholera this same inhibitory agency in the epithelium of the intestinal tract being paralyzed by the action of an inordinate number of comma bacilli, or by some other morbid cause, torrents of serum and other vital constituents escape, the flood gates of life are open, absorption is abolished and medicaments are in vain poured into an in-

sensible stomach. Hence results the inefficiency of medicinal agents and consequently the intractable nature of the disease.

The more palpable and proximate cause of Bright's disease is due to one of three conditions of the kidney, viz., the inflammatory, the waxy, the cirrhotic. Albuminuric retinitis is most frequently associated with the latter. The invasion of this form is as insidious and mysterious as that of the renal affection on which it depends. It may have existed for a long period before its presence is suspected, and would altogether escape detection unless betrayed by progressive impairment of vision supervening from causes unknown. Indeed, the presence of Bright's disease is sometimes not recognized or suspected until first detected by indubitable evidences discovered during an ophthalmoscopic examination made with the view of ascertaining the cause of the dimness of vision. The usual subjective symptoms are headaches of unusual severity, dyspepsia and uræmic convulsions. When the disease has existed for a long time, the eye assumes a peculiar appearance due to oedema of the conjunctiva. No age or sex is exempt from the visitation of Bright's disease and its consequences, but this form of retinitis most commonly attacks persons of middle age or those in later years, and by preference those whose constitutions have been undermined by excesses in earlier life by the use of spirituous liquors. It is not unfrequently associated as a sequel of scarlatina, typhoid fever, and in the female, with the pregnant condition in the later stages. When thus met with it is seen in its most curable forms, for upon the subsidence of those affections or condition great improvement of vision or its ultimate restoration may confidently be expected. With these exceptions it is a symptom of the gravest character, since it tells of organic changes in the kidney which seldom admit of restoration to the normal condition.

Albuminuric retinitis, sparing entirely the first, second and even the third pregnancy, may supervene during the fourth. The later the stage at which it appears the more hopeful the prognosis. Should it occur during the ninth month, complete recoveries are common, because early delivery removes the proximate cause, a sufficient time not having continued for the functional to have matured into an organic condition. Should it invade during the eighth month only about one-half the patients regain their former vision, but if it supervene during the seventh month or at an earlier period, recourse should immediately be had to the induction of premature labor, with the hope that the removal of the cause will ensure the removal of the disease. Neither the vision of the mother nor her life, is to be imperiled by permitting the continuance of a condition which may deprive her of both, for death may ensue before the completion of gestation, or during labor, from convulsions or from cerebral hemorrhage. Therefore, the simple accident of progressive amblyopia during pregnancy should be carefully interrogated and scrutinized with all possible vigilance; and if at any period it should attain a high degree, which it may do in one or two days, its association with albuminuria should be suspected, and if so ascertained, not an hour should be squandered in securing the removal of the exciting cause. Both eyes are almost always simultaneously affected, but usually in differing degrees. Retinitis is by no means always present in albuminuria, only in from six to ten per cent. of the cases; it never precedes, but when it occurs it always appears as the result of that condition of the kidney which determines albuminuria, the most obvious symptom.

Again, albumen in the urine is not *necessarily* a sign pathognomonic of renal disease. Its presence simply indicates that the function of this organ is vicarious or supplementary and performs that excess of labor of which the other emunctories combined

are incapable, and when this requirement ceases the phenomena of albuminous urine ceases also. For example, some persons after indulgence in heavy meals void, small quantities of albumen without exhibiting any other symptom of renal disease.

The most striking phenomena perceived with the ophthalmoscope are the hemorrhagic effusions. These are arterial in origin, present in a typical case, a fibrillated aspect with brush-like terminations, or when large more or less flame-shaped; they may appear as reddish, isolated islands, or large splashes disseminated throughout the retina. Adjacent to these is another appearance, viz., white spots punctiform, or aggregated or assuming a striated arrangement. The latter are not unfrequently seen approaching the macula lutea, or form an irregular ring around the optic disc. If, however, the macula lutea be invaded by either of these conditions, central vision is lost; but this event is rare, because the structures in which these conditions occur do not enter into the composition of this most sensitive spot, cells and cones alone here being found. These changes reside distinctively in the fibres of Müller which may be regarded as the connective tissue of the bacillary layer of the retina, and the whitish appearance presented is due to their hypertrophy and fatty degeneration. In consequence of these latter conditions pressure is exerted upon the layer of rods and cones and thus incapacitates them for the normal perception of visual impressions, even if the faculty of conduction of these fibres is not seriously impaired. Whether these phenomena enumerated are solely the results of the kidney affection or whether these and the structural changes in the organ are simultaneous effects of some common antecedent cause or combination of causes, is at present unknown.

The great practical deduction to be derived from this narrative is the general injunction never to regard any disease of the eye as unimportant; especially those forms

which, like amblyopia, *appear* to be merely functional and transient, for to him who correctly interprets them they may be portentous declarations that *vision* and perhaps life itself are imperiled; and more remotely lead to the discovery of a foe lying in ambush, whose presence, hitherto totally unsuspected, threatens the induction of pathologic changes from which there is no redemption. A highly intelligent physician, a few days since sent a patient from the country, affected with the sole symptom amblyopia which had supervened without any assignable cause. He had apprehended this symptom might be the effect of albuminuric retinitis induced by Bright's disease, antecedent or intercurrent. The state of the urine did not present the pathognomic evidence sufficiently satisfactory to such a diagnosis and he desired the testimony afforded by the ophthalmoscope. Happily for the patient, the fundus of the eye was entirely free from the phenomena characteristic of the affection suspected; by its exclusion, apprehension of this grave disease was banished, and he was in a condition to attribute the symptom to another cause and of less serious import.

The recuperative power of nature, though great is not omnipotent, nor unaided is it able to regain or to restore lost function. The conviction is general throughout the community that affections supervening without *obvious* cause will as spontaneously subside or disappear, ignoring the great fact that there are agents unseen by the eye, unrecognized by any sense, which originate disease, may still continue insidiously to act and by constant increments will advance the affection to palpable and incurable stages. The patient or friends willfully and heroically refrain from consulting a physician, arrogantly boast his equal chances of recovery (a sorry compliment to the profession), and commends his shrewdness in saving expense and thus cheat the doctor of his inconsiderable fee. But a day of retribution will surely come and his grave mistake be re-

vealed when too late. The more evident the symptoms, the more ready to seek counsel, although these usually are less significant and harmful in the comparison. The converse is equally true, the more obscure the symptom the greater oft-times is its significance and its concealed potency. The smouldering embers, comparatively incapable of mischief, in favorable surroundings are capable of the most destructive effects. In the economy of Providence there are no accidents, no small things. Physics obey the action of inexorable laws; effects will surely succeed the action of efficient causes. The match or the lighted lamp in the hand are harmless contrivances, but when ignited and in contact with combustible material as initial causes, they determine the conflagration of half the cities of Portland and Chicago and the loss of hundreds of millions of property. Results, therefore, cannot be measured by the apparent magnitude or significance of original causes. Likewise the mutterings of (irido-choroidites) sympathetic ophthalmia obscure and in early stages oft times curable, being deemed insignificant are usually disregarded and receive no intelligent treatment; but these, through error of due appreciation or mistaken economy, may precipitate the sufferer into irremediable blindness. The same errors attribute the premonitions of Glaucoma to indigestion, constipation or other causes equally harmless, when in reality they are the loudest expressions of alarm and the most pathetic prayer of nature for the instant adoption of the most efficient agents for relief; and yet the patient, alas! too often is disposed to say, "'Tis naught! 'tis naught! these symptoms came on of themselves and I guess they will go away of themselves; besides, if I do not go to the doctor I shall save his fee." Thus is allowed to pass unimproved, the *only time* and *only opportunity* offered for amelioration or cure. Every abnormality of the eye, therefore, pertaining to structure or function should receive the best advised treatment and that *immediately*. Safety and wisdom protest against procrastination and ever proclaim, "now is the accepted time."

ASTIGMATISM.

To determine the existence of astigmatism, the eye must, of course, be deprived of its power of accommodation. The patient's head must be held in such a position that the two eyes occupy the same plane. The head should be held in such a manner that in looking at an object twenty feet or more distant, none of the recti muscles are called into activity. What is known as a trial frame is indeed a poor makeshift for securing test lenses, because it is practically impossible to keep them in a fixed position in relation both the patient's eye and the object employed for testing. Risley's optometer, or some similar device, is necessary to secure perfectly uniform results. The method of proceeding with a series of cylindrical lenses, as in testing spherical defects of the eye, is likely to be misleading and should form only a part of the method of determining the state of refraction. It is better to employ Donders' stenopaic disc, which cuts off the light except in a single meridian, revolving this before the patient's eye until the position has been found where the patient sees best and clearest. If the acuity of perception appears normal, the disc should then be revolved ninety degrees, and such test lenses placed before it as will bring the acuity of vision in this meridian up to the normal standard, or as nearly so as in the first. The cylinder represented by this lens should then be substituted after removing the disc. The axis of the cylinder lying in the meridian where no error of refraction exists, and if the patient sees acutely through this glass, the first eye should then be obscured by an opaque disc, and the other eye subjected to the same routine. If found astigmatic simply, as in the first eye examined, the correct cylinder should be set in the catch-frame, and then uncovering the eye the effect should be noted, taking care, of course, to have the cylinders properly centered before each eye.

If the meridional lines should not lie either

vertically or horizontally, it will often be found that the acuity of perception, when both eyes are employed, is less than in one eye separately; and just here lies one of the difficulties which seem to puzzle the inexperienced practitioner. With the athletic accommodation always present in the astigmatic eye, and the associate muscular movements, make it difficult, without the eye is deprived of its accommodating power by artificial means, to suspend its customary associate muscular action. A rotary motion of from five to fifteen degrees may frequently be maintained in an eye when its fellow is excluded from participation until the refraction is determined; but when both eyes are required to unite in looking at an object, the astigmatic refraction having been corrected in each eye separately, in an abnormal position of rotation, the result is at once unsatisfactory. In nearly all cases of hypermetropic astigmatism, the meridian of greatest error of refraction is approximately horizontal, requiring the correcting cylinder to lie at about ninety degrees before the eye.

If, however, in testing the right eye the correcting cylinder must be placed at eighty degrees, and in testing the left eye at eighty-five or ninety degrees, it may be inferred that abnormal muscular contraction causes the discrepancy. If, however, the meridian of least error of refraction lies at forty-five degrees in the right eye, and at right angles to this in the left, it may be inferred, the defect being symmetrical, that no abnormal rotation exists. In no case, however, should the prescription for glasses be written unless the test has been made for each eye separately, and with both eyes together, and with uniform result.

The physician is frequently censured for failure to give relief, when the fault is entirely with the optician who filled the prescription. To avoid this trouble the physician should always insist on seeing and accurately measuring the glasses prescribed before they are worn.

OBSTETRICS AND GYNÆCOLOGY.

MATERNAL
IMPRESSION.

BY

T. M. KYLE,

M. D.,

AURORA, IND.

The foetus in utero is the subject of normal as well as abnormal impression.

The former being constantly influenced by the mother during the period of utero gestation.

While the latter may be impressed during the period of great mental excitement or shock, conveyed through the medium of the nervous system. Such impressions produce what is known as mother marks, and fortunately are seldom witnessed and are the result of an abnormal impression to the foetus, and evidently occur during the first months of utero gestation.

Our text books are mostly silent on this branch of medical science which, nevertheless, is one of great interest and evidently a more thorough knowledge of the subject that the foetus from an early period is constantly the recipient of maternal impressions, physically as well as intellectually—its looks, actions, cast of mind and temperaments; morally as well as intellectually, are the paternal gifts that more or less influence the future of the individual. The impressions are so strong that we may regard it as universal, although it is not manifested in the same degree. Children of intellectual parents are more susceptible to impressions than the illiterate or uneducated. A lady in our town, being pregnant, was very anxious that her child should be of a literary turn of mind and during the entire period of utero gestation she read books and papers, hoping thereby to influence her child with a desire for books. He is now seven years old and is a great lover of books and excels his classmates in their course of study. Another lady actuated by the same desire, that her child should love music, during the period of gestation cultivated the art and sang much. They informed me that when

the child was quite young she evidenced a strong desire for music and readily learns music without a teacher, while her sisters have but little desire for music. She is too young to be controlled by education.

If a mother is irritable, passionate, and gives way to fits of anger, she will evidently impress her child with like passions. Shall we not advise our lady patients when pregnant to cultivate an amiable disposition, spend their time in reading and in pleasant society, thus hoping to impress the foetus above everything else, that it may be the recipient of an amiable disposition?

As to the second proposition, namely: Does the mother, by strong impressions made on her mind effect the foetus in utero through the medium of her nervous system? We know physiological, pathological or embryological, that there may be like results produced by other causes, for while we fully believe that there are physical causes, operating to produce monsters, marks, &c., by the development of evolution where we see the physical effects on the foetus, to arrest the evolution in one part, while the other one goes on to approximate the full development. We can readily see why arrest of supply in one part may go on while in other parts evolution may go on to full development.

But our object is to show that while the physical may obey the laws of evolution, that the mental may produce the same results, but through a different medium.

Montgomery, in his work on pregnancy says, we cannot help thinking that consistent with reason and the present state of our knowledge to believe that very powerful impressions made on the mother's mind or nervous system may injuriously effect the foetus still lodged in the mother's womb, actually a part of herself, and deriving its supply from her body. We are all familiar with how a fit of anger or grief may through a mother's nervous system cause the death of the foetus.

The subject of maternal impressions is as

old as our art as Hippocrates, Galen, and even Scripture speaks of it.

Carpenter, in his work on physiology says: No physiologist of the present day is likely to fall into the popular error of supposing the marks on the infant to be referred to some strain sent through strong impressions on the imagination of the mother. But he says, there are a sufficient number of facts on record to prove that constant mental impressions of the mother may influence enough at the early period of utero gestation to produce deformity of the foetus.

But whatever the impressions may be, they must be of a character to modify the nutritive material supplied by the mother to the foetus.

When her babe was born, its hip bore the exact mark described by its mother, long before its birth.

Second Case.—During the late war, a soldier came home on furlough and during his stay his wife became *enciente*. Soon after his return to the field, and during an engagement he received a gun shot hole through his left hand by a round ball, as he supposed. On his return home his wife was greatly overcome. When the child was born, it had a perfect type of its father's injury through its left hand, otherwise it being perfectly healthy.

Third Case.—I know a young lady living in our city who has a withered hand, resulting as claimed, from strong mental impression from her mother. During her period of utero gestation, her mother dressed an old man's hand who had received an injury, and she was greatly interested and thought much about him. When her daughter was born her hand was sore and exactly resembled the injury of the old man. It required a long period before it was healed, and as before said, is now much smaller. We might go on and cite other cases but I deem these sufficient.

ANGLE OF

REFRACTION.

On the fifth day of the Ninth International Medical Congress, the editor of PROGRESS read an essay, in the ophthalmological section, on the necessity for reform in the manner of designating lenses, and suggested a return to the old astronomical refractions in the gradation of lenses by the angle of the radius, or the adoption of an entirely new system of gradation by the angle of refraction. Immediately after the discussion of this paper, Dr. Edward Jackson, of Philadelphia, proposed that "prisms shall be designated by the number of degrees light rays so deflected from their course by passing through in such a way that in the prism their rays are perpendicular to the plane bisecting its refracting surface, that is, the minimum deviation the prism can produce." Dr. Jackson considers the discrepancy between the angle of expression in the two planes of the prism and the angle of refraction of the light passing through so great as to demand recognition. He therefore proposes that prisms shall hereafter be designated in degrees representing the angle of deviation in the rays of light. The Congress found no difficulty in adopting the views of Dr. Jackson, because there has never been more than one method of designating prisms, namely, by the angular relations of the two surfaces. In considering lenses, however, whose properties have been less generally understood, harmonizing the three systems already in popular use, or the doing away with these and establishing an entirely different method of gradation, the difficulties of adjustment are great. Many persons even in the medical profession accept the statements of authors about matters not easily determined, and never stop to question the sources of their information. If Landolt says the metrical system is scientifically the most accurate method of grading lenses, most readers accept it. The truth is, we greatly need both a uniform medium for our lenses and a more reliable method of gradation.

PATHOLOGY AND HYGIENE.

PREVENTIVE

MEDICINE.

BY

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Read to the Mitchell District Medical Society, at Seymour, Ind., December 27, 1888.

The trend of medicine has always been curative. Therefore, theory after theory, as to the cause of diseases have, like men sprung up and grown almost to perfection and then fallen into decay; they have been

unstable as water, which cannot stand.

But there can be no reason offered why those theories of the past, have not, like those of our days, so nearly captivated or overshadowed the medical mind; that then, as now, they almost rendered it unable to follow any line of thought in reference to diseases, save the one supported by the dominant theory.

Therefore, the path of medicine is strewn with the debris of exploded theories, each of which must have contained grains of good, as do those of the present day.

These truths should impress upon our minds the fact, which forms the safest basis for consideration, which is the fundamental law of self-preservation. By carefully reasoning from this standpoint, we may be enabled to discover that many so-called pathological conditions have become physiological processes, which tend to the preservation of health, and the prolongation of life, which establishes the fact, that it is only when we are exhausted from over activity, or impoverished by faulty digestion, or malnutrition, that such processes pass into degeneration of structures, and tend to death rather, than to life.

It is well understood that so long as full and complete nutrition is maintained, every obstacle is met with an increased force of vital energy, and only when nutrition fails, does nature's physiological efforts terminate in exhausted vitality and hasten death.

These truths ought to convince every

thinking man, that the sanitary interests of the people demand so much, if not more consideration than their educational interests do. However, sanitary improvements are almost lost in the scramble for riches, and the push of the age for self-gratification; if we are permitted to form conclusions from the actions of the masses, who appear to be determined to gratify every whim that fancy may dictate, or avarice suggests, regardless of the laws of health and life.

They trust blind chance, and make no intelligent efforts to preserve themselves and their posterity from premature decay.

The false declarations of nostrum venders and the cunningly worded advertisements of patent medicine men, have caused the people to err. They have learned to rely on medicine for the restoration of health. They have been taught to believe that physicians and medicines can heal all the afflictions to which flesh is heir; if they fail, it is because the allotted time has come, and that no human effort could have done anything that would have prolonged life.

Therefore, sanitary work is ignored by the masses, so much so, that no general efforts are made to understand the laws of hygiene, and the declaration is frequently made by men from whom we would expect better things, that money spent for sanitary improvement is squandered, and that the public receives no good from such outlay.

In this way Boards of Health are crippled and their efforts to establish the practical workings of rules and regulations for the prevention of diseases, are thwarted and vital statistics are rendered valueless, for the reason; that public opinion does not require strict obedience of law by the physicians, whose duty it is to report births and deaths.

Though every physician knows that contagious or communicable diseases have at all times engaged the attention of the profession and in a special manner during recent years.

Perhaps, owing to the obscurity which often attends the out-break of such diseases

in a community, and the malignancy of type which frequently accompanies them, as well as the extent of country over which they spread.

These peculiarities task the skill of the medical profession. While they engage the attention of men in general, they engage sanitarians and scientists in a special manner, since Professor Lionel Beale, of Kings College, introduced the microscope in practical medicine, who, while making microscopic observations on the liver and spleen, formulated the living germ theory of diseases which has been almost universally accepted by the medical profession, more especially in regard to contagious or communicable diseases, and scientists are vying with each other in their efforts to isolate and describe the particular micro-organism which produces the several diseases.

It is no exaggeration to say the living germ theory has given the study of contagious diseases an impetus. It has done more. It has inspired scientists with a hope of immortalizing themselves, by having their names go down to posterity, as benefactors of their race, by their discovering the particular microbe which causes this or that disease, and the mode of preventing its ravages on the human family. To accomplish this noble purpose two distinct ideas have received special attention.

Pasteur adopted the idea of inoculation with attenuated virus, or rather that the micro-organisms might be so weakened by a succession of cultivations, that a patient, when inoculated with them, would experience but little inconvenience, while the body would be sterilized and rendered proof against the attacks of pathogenetic micro-organisms, expecting in this way to prevent the spread of contagious or communicable diseases, and possibly to banish them from among men.

But the German scientist, Koch, concluded that if diseases were produced by living micro-organisms, the means of their destruction outside the body ought to be

discovered and put into practical operation, and the spread of contagion prevented. The labors of these renowned scientists have been instrumental in bringing prominently before the public the value of disinfectants in the prevention of diseases.

So prominently have disinfectants been placed before the public, that but few surgeons would dare the risk of performing an operation of any importance without thorough disinfection. So thoroughly is the value of disinfectants impressed upon the public mind, that they will scarcely be abandoned, let future discoveries be what they may.

However, disinfection is much neglected everywhere, and generally but partially applied in sick-rooms, where there are usually a variety of articles, which need disinfection, but they are composed of different material, which must be subjected to different modes of disinfection, if thoroughly done.

Suppose this living germ theory, which has so nearly captivated the medical profession, should in the near future be exploded, it will accomplished much good, as the several articles recommended by its advocates for disinfecting purposes, tend to arrest fermentation, or to prevent that peculiar, and, as I think, undefined chemical action, which takes place in that class of diseases called zymotic. Therefore, I believe disinfectants to be as useful in Dr. Dugall's theory as they are in Dr. Beale's.

If I am not mistaken, Dr. Dugall was the first to oppose Beale's living germ theory, by declaring that contagious or communicable diseases were the result of zymotic poison, which he said differed from all known poisons, except it, like all others was more or less deadly in its effects, yet it differed from other poisons in this, that it could not be weighed in grains, measured in minims, nor stoppered in bottles.

But the action of all known poisons is confined to the individual poisoned, while zymotic poison renders the individual poi-

sonous, its virus multiplies in the body by chemical action, or by a process of destructive distillation going on in the blood secretions and tissues, until the entire person is saturated and enveloped in a poisonous effluvium. The saliva, breath, sweat, epidermis, urine and feces are all saturated with virulent poison, which endangers the health and life of their attendants and all around them.

When such conditions appear, they demand the most vigilant application of disinfectants, as they are at present the only known agents or medicines, with which we may hope to prevent the spread of contagious or communicable diseases. Which will in the near future be discovered to be an animal poison, generated in the body by chemical change, the character of which is governed by the dietary and habits of the individual and their sanitary surroundings, together with the meteoric conditions and climatic influences.

So far as I am informed, there can be no good reason offered against the foregoing proposition, but there are many reasons why we should believe it to be true, as we know that there are many things which appear indetical in composition, or in the proportion of elements which they contain, though they often possess quite different properties. I believe no chemist claims to be able to distinguish with accuracy between many of the proteides, though we are told that one proteide injected subcutaneously will kill the animal, while another so injected is innocuous. We must believe that protoplasm of different animals is as different as the animals themselves are.

Chemistry fails to show why one substance acts as a ferment, and another has no such action.

Chemico hystology has failed to point out the peculiar chemical agent in saliva and pancreatic juice, which converts starch into dextrine, and then into sugar, nor does chemistry tell us the agent in gastric juice, which converts proteides into peptones.

Physiology does not explain, nor does chemistry tell us, what the intermediate actions are, which take place in these processes.

We know not why some ferments go higher and produce more complex products than others. The mysteries of nature crowd upon us and after the lapse of centuries, we know not what there is in the fluid ejected from the fangs of the rattlesnake, which is so injurious to the blood of man; nor what chemical change it undergoes, when taken into the stomach per orem, where it is rendered inert. With all the advance or accumulation of scientific knowledge, we do not now know the exact stages through which a living active cell passes in its formation, nor do we know the chemical rationale of its operation on inert or non-living matter.

Here are questions that chemico histology has failed to explain. They are questions that we have lived too soon to answer. But I believe they will, in the main, be answered in the near future.

Since Professor Vaughn, of Ann Arbor, has given the scientific world an example of the mysterious operations of nature by his discovery of tyrotoxin, that peculiar poison found in milk and its products. Milk provided by nature, the first and most natural food for both men and animals during early life, and I dare say the best type of food the world ever saw.

Although it contains the chemical constituents which may be, and doubtless are chemically changed and converted into a deadly poison, more frequently than we imagine, by man's disobedience to the laws of health. Who shall say that this poison is not produced in the mother's breast under certain peculiar circumstances?

Our text books cite cases where the babe lost its life by being permitted to take its mother's breast soon after she had experienced great mental shock, but they do not tell us what peculiar change had taken place in the mother's milk. If I remember correctly, the idea conveyed is, that the

mischievous is done through the nervous depression, but I believe these cases sustain the idea that a chemical change is produced in the living body, and that this change develops animal poison, or tyrotoxin in the mother's breast. I further believe that this idea is well sustained by recent discoveries.

Chemico histology or physiological chemistry has quite recently brought to light a number of ptomaines most of which are said to be poisonous, and quite a number of leucomaines, which I believe are held to be uric compounds, and said to be sufficiently poisonous to produce disease and death, when subcutaneously injected. These are formed in the living body, undoubtedly by some peculiar perverted animal chemistry. There is also said to be found in the blood, spleen, urine, and intestine substances which are called animal alkaloids, the particular characteristics of which have not yet been discovered.

PROF. WATHEN'S PINE-APPLE.

We always had an exalted opinion of the varied accomplishments of the editor of PROGRESS, but we had no

idea he was clever enough to persuade such a staunch teetotaler as Dr. Wathen to eat his punch pine-apple even unto helplessness. Can such things be, and overcome us like a summer's cloud, without our special wonder?"—*Buffalo Medical and Surgical Journal*.

Dearly beloved brothers, Lothrop and Potter, PROGRESS hastens to inform you it was not the eating of the pine-apple which acted so energetically, but the odor which he inhaled from the fatally contaminated glass. Of course it could not affect any one else but a *staunch teetotaler* like Dr. Wathen, who is really suspected, in Louisville, to have acted upon the punch somewhat like bibulous paper, as there seems no other rational explanation of the sudden escape of the whole contents of the glass. Mind you, he was not seen drinking the punch, although he was detected in the act of eating the pine-apple.

SHOULD THE STATE TAKE CARE OF ITS INEBRIATES.

BY

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INTRODUCTION.—

The State assumes the right to license reputable men to sell alcoholic liquors to those who are in the habit of using them; to those who would like to experience their effects, and to those

who wish to treat their friends to something uncommonly good. This the State does in accord with the laws made to suit public opinion.

If this "opinion of the public" would demand it, the State could very properly assume the right to license opium dens, or saloons of euthanasia, where a fellow could shuffle off this mortal coil according to the most approved methods.

In other words, public opinion forms laws, whether just or unjust, and it is the duty of all good citizens to acquiesce in a state of affairs brought about by the decision of the majority.

In this paper I deal not with theories, but with facts, and I do not present a temperance tract; but I offer a remedy for a disease that the average doctor does not find himself able to treat, except with a temperance sermon in which he himself does not believe, or with a pledge he himself does not keep..

First, has a man the right to become a drunkard, and after he is a drunkard has he the right to be one?

The laws of the State permit the drunkard to be made, because the State licenses reputable men to sell alcoholic liquors, and the laws of the State concede the right to become a drunkard to every citizen, because the State says that personal liberty should not be interfered with. On the other hand, the laws of the State direct that the drunkard be fined and imprisoned for being what his personal liberty entitles him to be. It is, therefore, logical to say, that according to the laws of the State, a man has a perfect

right to become a drunkard, but that after he is a drunkard he has no right at all to be one.

Science claims that the inebriate does not exercise his free-will to remain or to be a drunkard, for the simple reason that he no longer has a free will to exercise, but that he is the involuntary slave of an uncontrollable desire. Science also claims that the drunkard may have never exercised his free will in the matter. He may not be a drunkard from choice, but he may have inherited a predisposition to become a drunkard, and necessity, opportunity and circumstances may have made him what he is, an habitual drunkard.

Science further claims that it has demonstrated that inebriety is a disease; that the State licenses the making of this disease, and that the State does not judicially recognize inebriety as a disease.

Science further claims that no man has a right to become a drunkard, because as a rule every man has a choice in the matter, and he ought to choose what is best for the individual and for society.

Science further claims that "Punishment is no cure for the Disease of Inebriety."*

The State and science, therefore, differ in their ideas about "becoming" and "being" a drunkard. The State considers "becoming a drunkard" a personal right, and "being a drunkard" a crime. Science holds "becoming a drunkard" to be a sin, and "being a drunkard" a disease.

Second, is drunkenness a disease?

The social drinker, the occasional drinker, the continual drinker, and the drinker on the sly, are not drunkards, if they do not habitually become drunk at long or short intervals. The laws of the State sanction moderate and temperate drinking. The men who made the laws did it in accord with the wish of the public. And the public, no doubt, is satisfied that the State can not legislate its people into temperate hab-

its. The people must be educated to be temperate through the press, the pulpit, the school and the lecture.

There are men who are said to get drunk by accident. These are indiscreet and should not be judged harshly. They ought to beware of accidents lest they become habitual drunkards. And again there are men who purposely get drunk to commit a crime, to drown their grief, or to celebrate some joyous event. These men should be punished according to the law and the evidence, not only for the crime they may commit whilst intoxicated, but also for becoming intoxicated. "The law holds that drunken intent is just as guilty as sober intent. And the law always asks, was the act done with the intent to do it."*

The habitual drunkard, however, suffers from a disease called dipsomania. That this disease is not a rare one, you no doubt know. There are a great many men and quite a number of women affected with this malady. The first question generally asked about a drunkard is, "who does he take after." The disease is therefore frequently inherited. "For example† there are inebriates, the absence of whose power of control has not been occasioned by their own default. There are persons born into the world with an innate susceptibility to narcotic action. These people are so constituted that if they drink at all they drink to madness."

Habitual drunkenness or dipsomania may be inherited or it may be acquired. I will read you a description‡ of acquired dipsomania:

"The alcoholic principle, by habitual abuse, perverts the action, if not the nutrition, of cerebral matter, and the frequent disturbances of the mental functions from fits of intoxication, the loose and irregular habits engendered, and the alternate states of remorse and attempts to drown conscience by more copious libations, all com-

* Judge Noah Davis.

† Norman Kerr.

‡ International Encyclopedia, Page 864, Vol. IV.

* Norman Kerr—"Some Medico-legal Aspects of Inebriety."

bine to create the dipsomaniac. He loses entire command over his will; has no power to resist the craving for alcoholic stimuli, and is transformed into the involuntary slave of an insane propensity.

Physically, the dipsomaniac has a lamentably broken down aspect; limbs feeble and tremulous, eyes watery and lusterless. But in the manifestations of mind and heart the change is still more sad. A process of mental deterioration goes on simultaneously with the habit of indulgence; the main aim of life is how to obtain liquor; capacity is limited to the means of gratifying the craving; the precepts of morality and religion, the ties of nearest and dearest kin have no sway over him; indeed, no consideration, human or divine, will interpose any barrier in the way of gratifying the propensity whenever it is possible. Nor does he now drink it with real relish, socially and convivially, but will swallow spirits as it were a drug. When this has gone on for some time, although a suspension of the use of stimulants be imposed by the interference of friends, or the occurrence of an attack either of delirium or maniacal excitement, yet his mind has suffered so materially that unless control is exercised over him and continued for a considerable period of time he will fall again. His moral feelings become more and more perverted and his intellectual powers weakened."

And now I will give you a description of inherited dipsomania, written by myself for *Progress*, July, 1888:

"Dipsomania is a mental alienation due to a morbid condition of the nervous structures, generally hereditary. The strictly periodical form of this type of dipsomania, the tendency to gradually shorten the intervals as the years pass, and the peculiar mental condition preceding the debauch are a proof that dipsomania is a disease of the cerebral nervous centers analogous to recurring neuroses, such as epilepsy, etc.

The disease is nothing but an attack of uncontrollable drunkenness, always kept up

until the stomach refuses longer to tolerate the alcoholic drinks. Then the attack stops as suddenly as it came, the sufferer recovers his usual health and spirit and enters into his business in a way as if nothing had happened. As a general thing these attacks recur at intervals of from one to six months, and the end is, some disease of the renal, hepatic or gastric organ carries off the patient.

Earnest resolutions or pledges do no good to ward off the attack. When the time comes the patient succumbs. An indescribable feeling of weakness of the nervous system is generally the first sign of an attack. This may be brought on by overwork, over-study, anxiety, worry, trouble, anger, etc., and the patient thinking himself proof against a debauch by his long interval of sobriety, yields to the temptation, and then nothing can head him off. Friends, family, duty, rank, morality, resolutions and pledge are all forgotten, and the patient drinks as long as his stomach will bear it. So strong is this desire for drink, whilst the attack lasts, that the patient will drink as long as he has money, or rather as long as he can get the liquor, though he may have to beg, borrow or steal it.

"Such people are the despair of their friends, the torment or ruin of their families, the scandal of their community. Seventy times seven they fall and are lovingly raised up. They express contrition, they make firm promises of amendment, but they always fall."*

Henry M. Lyman, of Chicago, says in the *Annual of the Medical Sciences*, of 1888, Vol. III, page 415:

"From the researches of these authors it appears that inebriety is a nervous disease closely allied to insanity, which manifests itself either periodically or constantly. It may commence suddenly as a consequence of some severe shock to the brain. The disease may also have its origin in the social habits of the patient, who from a simple

* Norman Kerr.

convivial drunkard may become transformed into a regular inebriate. It may be produced by the action of other poisons besides alcohol, so that there may be as many varieties of inebriety as of narcotics. There must, however, be a predisposition to inebriety in order to effect its evolution. Healthy men without neurotic predispositions may drink voluntarily in moderation without thus breaking down; but an intercurrent disease may turn the tide even against such individuals, and if they do not themselves suffer the penalty of indulgence their children will be found far on the road that leads to inebriety. Hereditary influences are among the most potent that determine this disease, and they follow the usual course. Thus, in mixed families, the male children of an inebriate mother, or the female children of an inebriate father, may alone exhibit the morbid tendency."

There is another type of drunkenness which goes under the name of ebriosity, and by which is understood the condition of continual half-way intoxication. This, necessarily, occurs only among saloon-keepers and those engaged in the liquor traffic, having access at all times to alcoholic drinks. This is a very fatal form of drunkenness and may be called incurable. It is the form of drinking which life insurance companies especially fear.

Habitual drunkenness is, therefore, a disease brought on by the excessive use of alcoholic drinks, though this use may or may not have been continual, and the victim is an involuntary slave for an insane propensity. He knows what is right, but can not choose; it and he knows what is wrong, but can not shun it. There is no loss of the power to judge of right and wrong nor any disturbance as to facts, but the mind is powerless to control conduct according to knowledge. This state which the drunkard is in may be called criminal irresponsibility.

Third, can the drunkard cure himself or be cured under the existing circumstances?

In the earlier stages of dipsomania, in-

herited or acquired, something can be done for the patient, but the cures are the exception.

As to chronic cases of drunkenness a reformation is improbable and very nearly impossible under the existing circumstances. The temptations are too great and the opportunities are too many, and though the drunkard may have a desire to reform or to cure himself, his will-power is enfeebled and he can not resist the demands of his habit unless he be removed from temptation and it be made absolutely impossible for him to get a drink. The drunkard is an object of contempt and disgust as a drunkard, and an object of pity and danger as a man, as a father, as a son, and as a brother. He is pitied by all good men, but they are powerless to help him. He can not help himself.

He can not reform whilst he is in the midst of temptation. The licensed liquor houses are easy of access, and indiscreet friends are not wanting to tempt him to go into such places and to take but one drink which is the spark that lights the attack.

Dr. Kerr says, "The struggle of the intemperate for freedom is a combat more terrible than any other fight on earth." It is a hopeless fight, I add, if unassisted.

Dr. Joseph Parrish says, "The temptation with which they are tempted is within. It is subjective. It circles in the stream that gives them life. It may be likened to a battery that is hidden somewhere in the cerebral substance—connected by continuous fiery wires, with a coil in every ganglion, from whence they continue to extend—attenuating and distributing as they go, reaching after the minutest nerve fibrils, which need only a throb from the inborn impulse to transmit a force that quivers in every muscle and burns in every nerve till the victim is suddenly driven to debauchery."

One of this unfortunate class makes the following reply* to the urgent remonstrances of his friends:

* Dr. J. J. O'Dea—"Methomania."

"Your remarks are just; they are, indeed too true, but I can no longer resist temptation. If a bottle of brandy stood at one hand and the pit of hell yawned at the other, and I were convinced that I would be pushed in as soon as I took a glass I could not refrain. You are very kind, good friends, but you may spare yourselves the trouble to reform me, the thing is out of the question."

This is the language of despair, uttered by a man who has struggled until he discovered that he was fighting an utterly hopeless fight.

Tell me now, is not the condition of the drunkard a deplorable one? In fact, is it not a blot on civilization? Should not something be done to prevent the increase of drunkenness and to diminish what there is of it?

Fourth, if the drunkard can not cure himself, has he a right to be protected against himself and against those who are licensed by the State to sell him the wherewithal to remain a drunkard?

It is true that there are a great many private institutions throughout the country for the cure of inebriates, and they do a great deal of good, but the charges for treatment in these institutions can not be met by the majority of drunkards. I have received four letters from the superintendents of such private homes. One of them says: "Your letter is at hand. My ordinary rates for patients requiring such care as your patient needs are from \$25 to \$75 per week," etc. The sanitarium asks from \$20 up, per week. The Homewood Retreat requires a five hundred dollar bond that the patient will pay \$15 per week. Taking into consideration that less than a year's treatment will do no good, it is quite plain that the majority of these unfortunates have, under the circumstances, no chance whatever offered to them to become cured of their malady. This is a serious matter to those afflicted with the drinking habit, and it is in their behalf that I make this ap-

peal to the citizens of Indiana, relying on their feelings of justice, charity, mercy and humanity that my efforts in behalf of the habitual drunkard will not be without success. I ask for these unfortunates nothing but what is just. There is no hope for these poor creatures until they are withdrawn from temptation and placed under restraint.

Fifth, a man becomes a drunkard is he a dangerous man to society? and if so, has society a right to be protected against the drunkard?

The State protects society against the drunkard in the following manner:

1. "The law assumes that he who, while sane, puts himself voluntarily into a condition in which he knows he can not control his actions, must take the consequence of his acts, and that his intentions may be inferred.

2. "That he who thus voluntarily places himself in such a position, and is sufficiently sane to conceive the perpetration of the crime, must be assumed to have contemplated its perpetration.

3. "That as malice in most cases must be shown or established to complete the evidence of crime, it may be inferred from the nature of the act, how done, the provocation or its absence, and all the circumstances of the case.

4. "The law has not yet judicially recognized inebriety as a disease."*

The State does in every way try to prevent the making of robbers, thieves, burglars, and murderers, and criminals in general, but it licenses men to make the drunkard. The State protects society against the murderer and the robber by imprisoning him, but it allows the drunkard to constantly menace the well-being of society.

I could present to you the history of afflicted households, whose happiness and welfare are blighted by otherwise beloved members, whose drunken habits have sapped the foundation of character, broken

* Clark Bell.

down the good name of the family and wasted the money which the family is in need of. Would you say that the poor wife, who supports herself and her children by sewing and washing, has no right to be protected against the evil habits of her husband? Would you say that the drunkard's children have no right to be protected against the evil influence, the bad example and the burden drunkenness of their father, which threatens to blight their whole lives? Would you say that the friends of the drunkard have no right to have an asylum provided, wherein they may place their unfortunate son, or brother, or sister, or father, or mother, or friend, in order that they may be cured of their malady, which is a curse to all coming in daily contact with the habitual drunkard?

These are questions that can have but one answer. Yes; society should be protected against the drunkard, who is made by consent of the State in accord with public opinion. I am dealing with truths and, therefore, I speak plain and to the point.

Sixth, if society has a right to be protected against the drunkard, if the drunkard has a right to be protected against himself, and if the drunkard has a right to be protected against those who are licensed by the State to sell him the wherewithal to remain a drunkard, does it not follow that the State should afford the protection?

In answer to this question I read you several extracts:

"From the very nature of the malady it is scarcely to be expected that the inveterate drunkard will voluntarily submit to control, or continue under it for a sufficient length of time to receive lasting benefit; and therefore it seems essential, as in the case of other insanities, that legal power, with proper precautions and restrictions, should be available to secure the possession of his person and the protection of his property. It is undoubtedly the duty of a good and wise government to provide for such cases, when it is so well known that the

consequences of unrestrained action may be so serious to the individual chiefly concerned; when families are so often thereby plunged into deep distress or absolute ruin; and when the amenity of society is so frequently outraged by a disflagrant crime. "The liberty of the subject" is a precious trust, but the absence of law to meet the case of the habitual drunkard is in reality license for evil, since no precaution is taken to prevent most grievous infringement of the liberties of others. It is certainly an overstrained delicacy in legislature to shirk interference with a class of cases which lead to so much private misery and public expenditure, as the records of our courts of law, prisons, poor houses and lunatic asylums can amply attest. But considering the case of the dipsomaniac from another point of view, a facility by law to control, would confer on himself an unspeakable benefit. It would thus afford him his only chance of cure and of restoration to society instead of permitting him to go on to wreck and ruin. Indeed, the neglect of law to provide such a check and remedy seems inconsistent, unjust and inhumane when we consider that while it permits the insensate drunkard to endanger his life, to waste his property and deprive his family of that which they are justly entitled to expect from his hands during life, or to fall to them at his death, it holds him responsible for any criminal act he may commit. No doubt the law assumes that he drinks voluntarily, and with his eyes open to all the consequences, and that his practices therefore form an aggravation of his guilt; but such is not the case, for he drinks involuntarily, and he is unable to exercise his reason aright or govern his will."*

"All experience has shown that little progress or none can be made toward the permanent recovery of a dipsomaniac so long as his business places him in more or less contact with alcoholic drinks, or in frequent association with drinking comrades.

* International Cyclopedia, Vol. IV, page 865.

Consequently both physician and friends should combine their influence to separate as far as possible the patient from such associations. And if it can not be done in any other way let him be induced to take a residence for six or twelve months in a well regulated asylum for inebriates until the paroxysmal tendencies have been broken. Enforced seclusion in a proper asylum, with no possibility of obtaining any kind of alcoholic drink, but where good air, good food, kind treatment and some suitable employment can be furnished on the same principle that applies to the treatment of insane persons, will save them from early destruction.”*

“For the permanent cure of inebriety, however, nothing avails but special treatment in hospitals provided for this class of patients. Of these the number is increasing as the public becomes informed regarding the nature of the disease and the appropriate means of combating its ravages,” says Dr. Henry M. Lyman, in the *Annual of the Medical Sciences*, Vol. III, page 420.

Dr. Wm. B. Carpenter, says in his book “On the Use and Abuse of Alcohol in Health and Disease,” on page 47:

“However responsible he may have been for bringing the disease on himself, his responsibility ceases as soon as he comes under the influence of the malady. The disease, however, may not be brought on by the act of the individual, and then it is clear at once that neither directly nor indirectly can he be deemed responsible. But, suppose that it were the result of his previous conduct, I repeat that, however culpable he may have been for that, he is not a responsible being while afflicted with the malady; for I can see no distinction between this form of the disease and any other which has been induced by the habits or acts of the individual.

“The only chance of a cure or alleviation is from attention to the health and ab-

stinence from intoxicating liquors. Neither can he be cured so long as the patient is at large, and no amendment can be depended on, unless he has undergone a long course of discipline and probation. Considering, then, that the individual is irresponsible and dangerous to himself and others, and that his disease can be treated only in an asylum, it is not only merciful to him and to his relatives, but necessary for the security of the public, that he be deprived of the liberty which he abuses and perverts, and that he should be prevented from committing crimes instead of being punished—or, I should rather say, being the object of vindictive infliction—after he has perpetrated them.

“Of the chronic form I have seen only one case completely cured, and that after a seclusion of two years’ duration. In general, it is not cured. Paradoxical though the statement may appear to be, such individuals are sane only when confined in an asylum.”

In a petition signed by fifteen hundred medical men in favor of the establishment of an asylum for the treatment of inebriates, and presented to the legislature of the state of New York several years ago, occurs the following paragraph:

“Without such an institution the physician has been compelled to turn from his patients discouraged, disheartened and defeated, and the victim of this painful malady has found a drunkard’s death and a drunkard’s grave. With this institution we can save hundreds who are now crowding our insane asylums, inundating our courts, dying in our prisons and perishing in our streets.”*

The insane asylums cannot and ought not to be used as a home for inebriates. Only those in the last stages of alcoholism, that is only those who are actually insane are sent there. Special attention cannot be paid to cases of inebriety in the insane asylums; besides, no one would voluntarily apply for admission into an insane asylum,

* N. S. Davis, *Reference Hand. Book of the Medical Sciences*, Vol. IV, page 121.

* Dr. J. J. O’Dea.

and if he were to do so, it were questionable whether he would be admitted. Therefore the insane asylums offer no aid to the inebriate.

Seventh, if the State should afford the drunkard a chance to be cured of his malady, how can it be done?

The only way in which the State, under the existing circumstances, can provide a protection for the drunkard, so that he may be cured of his malady, is by erecting and maintaining homes for inebriates. The sending of confirmed drunkards to these homes should be made compulsory by laws in the manner as the insane are sent to the asylums. Voluntary entering into the homes by confirmed drunkards should be encouraged, but only allowed after a proper examination by two physicians, who should certify as to the condition of the patient. A complete history of the case would also help the medical superintendent and his medical assistants in treating the patient.

The inebriate must remain at the home at least a year, when the medical superintendent, under the advisement of the board of trustees, may let the patient out on trial until he has proven himself able to govern his will. The friends should not be allowed any control over the patient after he becomes an inmate of the home to which, according to circumstances, he is assigned.

It is not my object to direct just how these homes should be built and afterwards carried on; all this is subject to the decisions of those who make the laws; but I feel that in order to make this paper of sufficient worth to merit attention, I must give a general outline of what can be done for the inebriate. With this object in view, I will suggest that the money derived from the licenses issued and from the fines collected from those who are not yet confirmed drunkards, and from those who transgress the law by selling to minors, by selling on Sundays, by selling without a license, etc., be used for erecting a home for inebriates of the male sex and another for the female

sex, and for the sustainment of these homes.

The homes, after they were once in good working order, could be made self-sustaining under efficient management. Indeed, the inmates should be employed in labor in order to learn discipline and to improve their bodily health. They should also be afforded recreation and amusement to prevent discontentment with the situation in which they are placed, and to convince them that there are other ways of enjoying life besides sitting in a saloon and becoming drunk.

These homes should be erected in the country, away from temptation. Proper rules and regulations should govern the inmates as well as those in attendance. The superintendents should be medical men, who ought to be under the control and advisement of a board of directors or trustees, one of whom should be the President of State Board of Health. The salaries of the officers should be regulated by law, and they ought to give a bond. Politics would necessarily have something to do with the appointing of these men, which, undoubtedly, would be for the best.

The drunkard who is out on trial should be considered as belonging to the institution until he has kept sober for the time of one year. Should he show signs of the return of his malady before the year is up, he should immediately be brought back to the home. It is presumed that the person who can keep sober one year is no longer to be considered an habitual drunkard.

JORDAN W.

LAMBERT.

Jordan W. Lambert died at his home in St. Louis January 6, 1889, aged thirty-six years. During the short period of his business life he had, by his untiring energy and sterling integrity succeeded in establishing one of the largest pharmacal houses in the West, while his Listerine is almost co-extensive with the science of medicine.

BOOKS AND PERIODICALS.

THE CASE

OF EMPEROR

FREDERICK III.

Full Official Report by the
German Physician and

SIR MORELL MCKENZIE

The German report trans-
lated by

HENRY SCHWEIG, M. D.

New York: 48 University
Place; Edgar S. Werner,
1888.

Dr. McKenzie's publication has been pretty well distributed throughout this country. The other side of the question is now presented in a volume containing also McKenzie's report. To all those who desire to be familiar with all

the facts in this celebrated case, this work will prove exceedingly interesting. Says Dr. Schweig in his preface: "The pitiful exhibition of temper which is shown in both the English and German reports compels the reader to wade through a mass of irrelevant matter so that he may follow the medical thread of the report understandingly. An element of personal spite, jealousy and animosity has crept into the pages and there is perhaps no medical report of which we are cognizant, into which so much matter entirely foreign to the subject has been introduced. The report of one of the gentlemen shows the possibility of giving an opinion purely professional in tone, and strictly to the point. With this one exception the bearing of the parties engaged in this controversy has not elevated the standard of the medical professional in the eyes of the general public, whose faith in the correctness and reliability of physicians' opinions was much disturbed thereby."

It may be interesting to note that whilst the British Government, animated no doubt by sympathy for the Queen's household, from the first firmly supported Dr. McKenzie in all his views concerning this matter, the profession in England does not, it seems, entertain the same views, whether from motives hitherto unexplained, or in obedience to a high standard of ethical deportment, it is not difficult to see a tide of strong opposition to McKenzie's course. The public demanded frequent reports of

the progress of the Crown Prince's affliction. The medical profession not only wanted a diagnosis, but at least an outline of the treatment employed, with frequent reports of the result of such treatment. To meet this demand both the *Lancet* and the *British Medical Journal* were equally active in pressing Dr. McKenzie for the latest items which might prove interesting to their readers. Seeing the well-directed efforts and irresistible arguments with which Dr. McKenzie met his German accusers, the Royal College of Physicians in London exhibited some uneasiness, the final result of which has been the acceptance of Sir Morell McKenzie's resignation as a member, and an apology from the editor of the *Lancet* for having published his bulletins. The medical profession in London, it must be remembered, is almost unanimously jealous of Sir Morell McKenzie, who, as a mere specialist, as they are pleased to say, developed not only enough interest in his special field of practice to establish a large hospital, but to make that hospital the center of educational training for those who treat diseases of the throat in all parts of the world. It is therefore easy to understand at least some of the causes that have led to his resignation as a member of the Royal College of Physicians.

There are certain titled egotists in the British empire who look with contempt upon those whom they consider low-born, and who by dint of superior intellect and industrious habits of study, manage to attain eminence in the profession of medicine. It set them wild with jealousy that he should have presented to the world an account of his having been selected as physician in charge of the case of one of the royal family, who finally became Emperor of Prussia. This was more than they could possibly stand without a kick. The same feelings, with the additional vexation of seeing a foreign doctor called in to take charge, excited the jealousy of the German physicians.

Meanwhile the controversy is over, and it would be difficult for the most painstaking and impartial student of these reports to find anything in them to justify the general sentiment of condemnation which, we are told, prevails in London.

Whatever may be said of McKenzie's report, it is exceedingly mild in tone as compared with those published by his German colleagues. It is a rule of practice in courts of justice in this country to give to the defendant the benefit of any reasonable doubt of the truth of allegations made by the plaintiff. The medical profession, without reference to Sir James Blackstone's commentaries, have somehow or other, fallen into the habit of giving to the patient the benefit of any doubt that may exist as to the malignancy of morbid growths. A reasonable amount of prudence in both the diagnosis and prognosis would protect a person in this country, at least, from extirpation of a part or all of the larynx, in any doubtful case of morbid growth in the throat.

McKenzie's position regarding this matter must be accepted as in strict accordance with the best practice in this country.

If the doubtful nature of the growth was finally cleared up by the demonstration of its malignancy, it would, of course, establish the fact that a prudent degree of caution had been exercised; if, per-contra, as often happens, a doubtful growth finally turned out to be purely benign, in a case like that of the Crown Prince and Emperor of Prussia, it could not be regarded as less than a great crime to have extirpated all or part of the larynx in consequence of the presence of such a growth.

DR. ROBERT

T. MORRIS.

Dr. Robert T. Morris has been appointed clinical instructor in

the New York Post Graduate School. We congratulate Dr. Morris on his promotion, and the management of the Post Graduate School on its good judgement in making the selection.

HAND-BOOK OF HISTORICAL AND GEOGRAPHICAL PHTHISIOLOGY.

With Special Reference to the Distribution of Consumption in the United States. Compiled and Arranged

BY

GEORGE A. EVANS,

M. D.,

Member of the Medical Society of the County of Kings, New York; Member of the American Medical Association; formerly Physician to the Atlantic Avenue, and Bushwick and East Brooklyn Dispensaries, etc.

New York: D. Appleton & Company, 1888.

It is the author's aim to present a sketch of the development of our knowledge of Pulmonary Consumption from the time of Hippocrates to the present time, together with statistics in regard to the geographical distribution of this affection; and to so arrange these statistics in regard to the geographical distribution in the United States as to make them available in selecting localities of resort for invalids.

The first chapter presents an historical sketch beginning with Hippocrates and concluding with Powell, who wrote on diseases of the lungs, in 1886. In the force of this historical sketch it is apparent the author is not an experimental observer, nor a very close student of the experimental observations of others. It is hardly fair to quote Flint as saying that "clinical experience fails to furnish positive proof of the communicability of phthisis." This is not the kind of experience which supplies proof of the communicability of this disease already established in a person sick enough to employ a physician. Flint nor any other well-informed person would undertake to dispute the fact, that consumption in adults almost invariably appears in the respiratory organs first. That it prevails in localities, that settlements in which it had not for a period of years been known, developed a number of cases after the introduction of an infected person into that locality. The venerable Professor H. I. Bowditch, of Boston, exhibited conclusive evidence of this fact in the publication of the prevalence of this disease in Massachusetts. The subsequent destruction of houses which had been in-

habited by people who died of consumption. He mentioned instances of persons in perfectly good health, who had gone into houses the former occupants of which had died of consumption; the disease in a few months making its appearance and extending from one member of the family to another until the second inhabitants perished with the disease.

It is acknowledged by Dr. Evans that consumption prevails wherever men may be found, among all ages, classes, and races of men. All these geographical tracings of the disease are limited to the United States census report, and the sources of information are in all cases employed for scientific purposes. One fact, however, is apparent from these statistical reports, namely, the percentage of diseases reported for consumption, is great in proportion to the density of the population; barring however, some of the populous districts which are but newly established.

The percentage in the whole United States is put down at 12.09. Arizona and Arkansas have a percentage above six per cent. of the disease from all causes, whilst California, a resort for a large number of afflicted people, has 15.5 per cent. Colorado, Dakota, Florida, Idaho, Iowa, Kansas, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Mexico, North Carolina, South Carolina, Texas, Utah and Wyoming Territory, have each less than ten per cent. Utah has five per cent., Wyoming 2.6, Connecticut 16.0, Delaware 16.0, District of Columbia 18.0, Illinois 10.0, Indiana 12.0, Kentucky 11.0, Louisiana 10.0, Maine 10.0, Maryland 12.0, Massachusetts 15.0, Michigan 13.0, New Hampshire 15.0, New Jersey 14.0, New York 14.0, Ohio 13.0, Pennsylvania 12.0, Rhode Island 14.0, Vermont 20.0, Virginia 12.0, Washington Territory 13.0, West Virginia 12.0, Wisconsin 11.0.

Now, in Washington Territory the whole number of deaths are stated at seven hundred and fifty-five. One hundred of these

are set down as due to consumption. Statistician Evans, be good enough, please, to tell us if you think the diagnosis was made by competent persons in these one hundred reported deaths from consumption in Washington Territory. The character of the population of that territory would indicate that seven hundred and fifty-five deaths are an exceedingly small number for any ordinary year for the tomahawk and scalp-knife. It is part of the report of the census bills at Washington, and if it is not available for scientific argument, what on the face of the earth is it good for?

Dr. Evans is to be congratulated, however, upon the enormous amount of labor it must have cost him to get so much statistical matter in such an admirable, convenient form for reference.

He begins the fourth chapter with the classified topography and climate of each of the several States and Territories. The most amusing chapter in the whole book is the fifth, which is devoted to the consideration of consumption in the United States Army, and Meteorological Reports. Just think about meteorological conditions for the distribution and development of this disease dependent upon a specific micro-organism which "dogs the steps of man wherever he may be found, and claims its victims among every age, class, and race."

The sixth chapter is devoted to the discussion of the etiology. Says the author: "Cold does not produce consumption, and warmth gives no protection against it. The mean level of temperature, therefore, has no significance for the frequency or rarity of phthisis in any locality." It is somewhat difficult to criticise this chapter, as we have already copied nearly all of it which does not lie between inverted commas.

Said the late Prof. C. D. Meigs: "Although I believe that Rachel was the most eloquent human being that ever lived, she was mainly so in the use of others' thoughts and others' words. As to her own power of imagination, reasoning or judgment, I

presume they were those of a play actress." After examining Dr. Evans' book, it is but fair to say he is a delightful manipulator of others' reports and a skillful compiler of others' statistics. As to his ability in the treatment of the subject, one may look in vain for a better familiarity with the clinical or pathological features of phthisis than may be found in any medical library. The especial training and ability of this author in the management of phthisis is but little known in the hospitals and has never been seen at the bedside. Notwithstanding all this, however, Dr. Evans is a charming writer, and whatever may be the faults of his book in other respects, its strongest features must be found in the classified grouping of the scattered facts available for his purposes. The *bacillus tuberculosis*, so far as we know, is not influenced by climatic conditions, and the statistical facts in this book tend simply to show the influences of congregating persons affected with consumption upon the mortality of certain regions of the country.

A CORRECTION.

Our attention has just been called to a misstatement of your foreign correspondent in his letter from Munich, published in your December number. He says, "The third edition of his (Winckel's) admirable treatise on midwifery has just been issued and easily takes the lead in the German schools. Dr. Parvin, of Philadelphia, will soon bring out an English edition," etc.

It is the *first* edition of Prof. Winckel's Midwifery that has just been published, and by special arrangement we are to publish an English translation, by Dr. J. Clifton Edgar, of New York, who has recently been in Munich. Dr. Parvin is the editor of Winckel's Diseases of Women, which we also publish; this latter fact has probably misled your correspondent. On our own account, as well as on Dr. Parvin's, with whom we have had a conversation about it, we thought best to advise you of the error, knowing at the same time you were unacquainted with the facts.

Very truly yours.

P. BLAKISTON, SON & CO.

THE PEDIGREE
OF DISEASE.

Being six lectures on temperament, idiosyncrasy, and diathesis, delivered in the theater of the Royal College of Surgeons,

BY

JOHNATHAN HUTCHINSON,

F. R. S.

Being the first number of Wood's Medical and Surgical Monographs, publish monthly at \$10.00 a year; single copies, \$1.00. Jan., 1889. New York. Wm. Wood & Co., 56 and 58 Lafayette Place.

This work appears in the form of an octavo, with stiff paper cover, and is to be of a character somewhat similar to the Library of Standard Medical Authors. Mr. Hutchinson is in many respects the greatest member of the medical profession in London, is nevertheless unfortunate in the obscure manner of

presenting his thoughts on the most important subjects. A great deal depends on the style of the writer, which on a medical subject should at all times be clear. Mr. Hutchinson begins his first lecture with this sentence: "I fear I do not much mistake in the belief that that the subjects which I have ventured to take for my present course of lectures are by no means high in professional favor."

His definition of temperament is worth repeating. He says at page six, "We may perhaps define the term temperament as applicable to the sum of the physical peculiarities of an individual, exclusive of all definite tendencies to disease. Different temperaments are to be assumed to be likely to give some degree of peculiarity to morbid processes when such have been induced by other causes; but they do not in themselves involve any special proclivity. When most strongly marked, temperament is still consistent with the prolonged enjoyment of perfect health. If there be distinct proclivity we must then use a stronger term, and speak of diathesis."

Mr. Hutchinson's lectures have for a long time been before the profession of Great Britain, and, although musty with age, are sufficiently fresh to warrant their reproduction in the present form for the American reader.

The second part of the volume embraces

a series of lectures on the common diseases of the skin, by Robert M. Simon, M. D., of London; following which, and forming the concluding yortion af the volnme, are a series of clinical lectures on the varieties and treatment of bronchitis, by Dr. Fer-rand, of London.

These lectures were revised in September, 1887, and cover one hundred well written pages, the whole forming an agree-able variety of reading matter for a day's journey by rail. There can be little doubt the enterprise will prove successful, and Messrs. Wm. Wood & Co. are entitled to the thanks of the profession for presenting a good quality of medical literature in this cheap and handy form.

PROF. WILSON'S
PUNCH.

It will, no doubt, greatly surprise the readers of PROGRESS to learn that Professor Frank C. Wilson has been subjected to great annoyance on ac-count of the following paragraph in the De-cember issue:

"Being sure it would inspire the warmest feelings of friendship and smooth the shriveled brow of age, Professor Frank C. Wilson, who had never before experienced the influences of spiritual aid in a post prandial address, grew to be the most eloquent speaker and original punster in the whole assembly, all on account of the effects of two pints of punch."

It will be observed that he was not ac-cused of drinking the punch, for if he had done so he could never have spoken as he did. It was really owing to the fact that the two gentlemen sitting on each side of him drank a pint each, and Professor Wil-son, being a very magnetic person, acted as the medium of communication between them. The church people may therefore cease their wrangle over the matter, as their worthy member neither touched, tasted, nor handled the punch, but became affected by the two pints aforesaid, wholly without fault of his.

CORRESPONDENCE AND SOCIETIES.

MITCHELL
DISTRICT
MEDICAL
SOCIETY.

Thirty-fifth Semi-annual
Meeting, held at Sey-
mour, Ind., Dec. 27 and
28, 1888.

Reported for PROGRESS.

BY

N. N. SHIPMAN,

M. D.,

SEYMOUR, IND.

The Mitchell Dis-trict Medical Society met at the First Bap-tist Church in the city of Seymour, Ind., on Thursday, the 27th day of December, 1888, John D. Simp-son, M. D., Presi-dent, in the chair.

In the absence of the Secretary the min-utes of the previous meeting were not read. Dr. James M.

Shields, of Seymour, was chosen Secretary *pro tem.* and the meeting adjourned until 1:30 P. M.

It met again promptly at the appointed hour and was called to order by the Presi-dent. The first paper on the programme was one on Preventive Medicine, by Dr. J. S. Arwine, of Columbus. This paper was referred to the publishing committee without discussion.

Dr. Maxwell, of Bloomington, then read a paper on Erysipelas, giving several case reports which had recently occurred in his practice. Dr. Orvis said the paper was an excellent one and fully endorsed the treat-ment as given by the essayist.

Dr. Kyle, of Aurora, said the cases re-ported were certainly very peculiar and very destructive in their nature, more so perhaps than any he had ever seen in his practice, and asked the author in regard to the destruction of tissue. He said there must have been some septic poison in the system, independent of erysipelas, that caused such virulence from the start, and would like to hear from other members of the society on the subject.

Dr. Galbraith, Superintendent of the In-sane Hospital at Indianapolis, said he had seen several cases lately in the hospital and had experienced great difficulty in prevent-

ing the spread of the disease. He said he had good success in his cases, loosing only one out of quite a number that had been treated. His treatment was the ordinary treatment for that disease, both external and internal.

Dr. Arwine, of Columbus, said he had never seen cases that presented such discouraging features from the beginning, and were attended with such rapid destruction of tissue; he had found warm poultices very beneficial sometimes in the treatment of this disease, especially where there was a high grade of inflammation.

Dr. Charlton, of Seymour, said as a local application he had always used the sugar of lead in solution, until quite recently. He had found great benefit from the sub. nit. of bismuth rubbed up into a paste and applied locally. He thought the mur. tr. iron acted as an antiseptic.

Dr. Maxwell closed the discussion by answering a question propounded by Dr. Kyle in regard to the first symptoms noticed by him in his cases, especially the case where it commenced in the toe. He also defended his poultice treatment which had been severely criticized by some of the discussionists.

Dr. Galbraith, of Indianapolis, then read a paper on Gynecology. On motion, the paper was referred to the publishing committee.

Dr. Gaddy, of Lovet, opened the discussion by saying the field was most too large for him to enter upon. He gave his experience; however, in the use of the pessary in the treatment of displacement of the uterus. The peculiar hot spot on the head, spoken of in the paper, he thought pathognomonic of uterine trouble and was most always found associated with uterine disease in the insane women.

Dr. Maxwell thought the insane hospital afforded not only a vast but, fruitful field for the essayist to continue his investigations, and hoped that the society might have the

pleasure soon to hear him again on the same subject.

Dr. Galbraith then closed the discussion, and said in answer to Dr. Kyle's question, that as a rule the menses were suspended in insane women.

The next paper was on "Pneumonitis," by Dr. McCoy, of Madison. The paper was referred to the publishing committee. Dr. Orvis opened the discussion by saying that he could not understand why the profession generally should condemn routine treatment in this disease, inasmuch as the lung structure, tissues and everything connected with the lungs were all about the same. For his part he was satisfied with it, and until something better offered he would continue to practice it.

Dr. Easley, of New Albany, said he had nothing to offer as to treatment, but he thought the disease was systemic instead of local, and that it terminated as a general rule by a crisis on the fifth, ninth, eleventh or the thirteenth day, when the temperature began to fall and the patient began to mend. If anyone doubted the truthfulness of what he had stated he would like for them to test the matter by closer observations in the future, and he thought they would be convinced. He said further, that he had never known a *perfectly healthy person* to contract the disease. He thought, too, that pneumonia in the aged and infirm was almost always fatal.

Dr. Freeland, of Bedford, said his experience coincided with that of the last speaker.

Dr. Charlton said in regard to treatment, he had used ergot, but had derived no apparent benefit from its use, and had abandoned it. He had used verat. viridi, he thought, to good advantage. He thought that where active congestion took place in the lung it was the best thing he had ever tried, and to control the circulation there was nothing better. He had never failed to bring down the temperature, and thought

it was the most important remedy we had. Would like to hear the experience of others on the subject.

Dr. Kyle said in reference to a statement made by Dr. Easley, that his experience was that a perfectly healthy person *could* be attacked by the disease, and furthermore, he did not believe the disease could be aborted, as had been stated by some of the members of this society; he thought it would run its course. He thought, too, that an old person should never be raised up in bed while suffering an acute attack of the disease. He had known cases where the immediate cause of death was undoubtedly the result of such action upon the part of the nurse.

Dr. McCoy thought that different treatment by different practitioners, where the surroundings were entirely different, would not be inconsistent with nationality, and a good degree of success might be expected from all the different lines of treatment that had been suggested. He thought a routine treatment might do if all cases presented the same symptoms and were attended by the same conditions and surroundings, which was not likely to be the case. His plan was to treat the different cases, each on its own merits.

Dr. Wm. Bailey, of Louisville, criticized somewhat sharply, both the paper and discussions. He wanted to know what was the character of the pneumonia. He had listened to the paper (a very good one, by the way), but what does the author mean by pneumonia? and what do the different speakers mean when they speak of pneumonia? I have not heard one word about the different types of the disease; he would like to know something about that; also about its origin, etc.

Dr. Burton, of Mitchell, said the difference in the opinions of those discussing the subject might be harmonized by taking into consideration the different surroundings of the various practitioners. He thought a common-sense treatment was the best after

all, and he treated each one according to its merits.

Dr. McCoy then closed the discussion.

Dr. Easley then read a paper entitled, "The Significance of Albumen in the Urine."

Dr. Stillson, of Indianapolis, opened the discussion by saying that he used to regard the presence of albumen in the urine as a very serious matter, but since he had worked a little in microscopical and other means of investigation, his opinion had been considerably modified. He thought when albumen is found in excess in the urine, immediate steps should be taken to eliminate it from the system; uncomplicated with other diseases he did not consider its presence at all serious. He thought, however, as physicians, we should be a little more cautious in giving an unfavorable opinion in every case before we have made a thorough investigation.

Dr. Easley then closed the discussion.

Dr. Freeland, of Bedford, then read his paper on "Early Diagnosis of Hip Disease," the paper being referred to the publishing committee without discussion, owing, perhaps to the unfamiliarity of the general practitioner with the subject. The essayist, however, gave a brief outline of his treatment, favoring as a mechanical means of support the hip splint. He thought no permanent cure could be expected, the disease generally progressing until complete ankylosis took place.

The society then adjourned for supper.

NIGHT SESSION.—

FIRST DAY.

The society was called together again at 7:30 P. M. by the President.

The committee appointed to fix the next place of meeting brought in their report, West-Baden being the place chosen for the next meeting of the Society. The time was not definitely fixed, but it would be some time in the latter part of June, 1889.

By a vote of the society, Dr. Pennington was made a member.

Professor E. R. Palmer, of Louisville, was then introduced to the society and gave a brief address on the subject of "Gonorrhœal Cystitis," or rather on the "Sequelæ of Gonorrhœa." He also exhibited what he called a *shot* or *loaded* bougie and recommended it as being far superior to the stiff, unwieldy instrument now in use.

At the close of his remarks, Dr. Thad A. Reamy, of Cincinnati, delivered a lecture on the treatment of endocervicitis. His method, which he claims has proven quite successful in the cure of a condition which common experience recognizes as very rebellion to the usual modes of treatment, consists in dilating the canal with slippery elm tents after a special plan, as follows: In a chronic case with the well known tenacious mucous plug and the patulous external os and, generally, the so-called granular erosion, the speaker had found as a rule, to which he admitted exceptions, that the os internum is firm and not patulous. In such a case he introduces a slippery elm tent of small size, so as to require no force in introduction within the os internum. It is secured in position by a vaginal plug of cotton and iodoform. At the expiration of two or three days the tent is removed and one of larger size, but not large enough to require force, is immediately introduced. At the expiration of a few days a tent of still larger size is substituted with the same associate treatment. This treatment is continued for some weeks until the dilatation is sufficient to admit with ease a probe three-eighths of an inch in diameter, and in some instances the dilation is continued until a probe one-half inch in diameter can be admitted. The dilatation has been so gradually and so gently accomplished that no visitation of moment or abrasion of epithelium to any dangerous degree has occurred. He has not, therefore, encountered a single case of septicæmia, notwithstanding the introduction of one tent follows the removal

of its predecessor until in some instances ten to fourteen tents have been used. At the same time he warned his hearers of the well known great danger of second and third tenting (in succession) with the sea-tangle tuputa or sponge tent.

Another important feature of his method is the fact that when dilation is so gradually obtained it is far more permanent, thus allowing of the greatest facility in the application of medicaments and to the cervical walls by cotton probe. In obstinate cases he now applies carbolic acid with the sponge, tr. iodine and chloral, sol. of nit. of silver, not too strong, etc. In these cases repeated thorough applications are made at one setting, but not repeated. At the expiration of two months, during which the patient may go about her ordinary vocations, the tenting is resumed and completed as before, then followed by medication as before.

In many cases the speaker had secured a cure by the tenting alone. The good results, in his opinion, being attributable to the pressure of the tent upon the tissues, also to changes due to the dilatation itself.

The speaker would of course urge the necessity of all local treatment being supplemented by proper constitutional remedies and proper hygiene. He considered that the profession owes much to Prof. Wm. H. Byford, of Chicago, for calling attention so forcibly to the great value of the slippery elm tent in certain cases. So far as he knew, however, his own method of treating chronic endocervicitis had not been recommended by any other authority than himself.

Dr. Kenedy, of Shelbyville, Ind., then read a paper on "*Malignant Tumor of the Bladder with Vesico-rectal Fistulas.*" The paper was referred to the publishing committee. Dr. Palmer said the paper was an exceedingly interesting one, and one that in thought could not possibly have been correctly diagnosed, while the subject was living; a specimen of the bladder and gut was exhibited, showing the fistulous open-

ing from the one into the other, also showing a large malignant tumor, occupying the fundus of the bladder. Dr. Palmer thought the treatment as related by the essayist was as good as could have been given, where the diagnosis was so obscure. The author of the paper stated, that he tried all the remedies that he was acquainted with, without any apparent benefit, until he tried what is known as *Lambert's hydrangea*. This seemed to give immediate relief, and restored his patient to a moderate degree of health. He therefore attributed the good results to this remedy, a conclusion however not shared in by a majority of the members present.

Dr. Orvis reported a case of supposed tumor in the abdomen, which after death, a post mortem revealed to be ulceration of the stomach with perforation. The paper was referred without discussion.

The following committees were appointed by the Chair: on arrangements, Drs. Remington, of West Baden, chairman, Yost, of Mitchell and Gerrish, of Seymour. On programme: Drs. J. M. Shields, of Seymour, G. W. Burton, Mitchell and J. E. Harris, of Bloomington. This closed the first day's work of the society.

FRIDAY MORNING,
DEC. 28, 1888.

The society was called together by the President, Dr. Simpson. A paper by Dr. Kyle, of Aurora, on "Maternal Impressions," was read and referred to the committee on publication. Dr. Mathews said, authorities were divided on the question; strong proofs have been adduced by those holding the affirmative side of this question, and equally strong proofs have been brought forward by those holding the opposite view, he rather holds to the popular side of the question, that maternal impressions did mark and otherwise influence the foetus in utero. Dr. Cecil thought the best authorities were adverse to the theory. The scarcity of the sacral nerve supply is hardly sufficient to establish the

theory, and without the nervous theory he did not think the proposition could be sustained. Marks of various kinds and monstrosities have been accounted for, on other and more rational principles. He thought however, that if there was anything in it, it must occur in the earlier stages of pregnancy. He concluded his remarks by saying, that in his opinion maternal impressions do not exist. •

Dr. Palmer thought the whole question was beyond our present knowledge, and there was no evidence in favor of monstrosities being the result of such impressions, he said the profession of to-day, was as a generally thing opposed to the theory, but I think he said, the most of us have a sneaking notion that it is so.

Dr. Kyle, in closing the discussion said, while there was no immediate nervous connection, still there is much evidence to support the theory, and we are not willing to give up our notions in regard to it. He said he had hoped that a fuller discussion would have been made on the question.

Dr. Stillson, of Indianapolis, then read a paper on "Galvano-cautery in Eye Surgery," with illustrations on the black board, showing the construction, utility and cheapness of the gravity battery, the one he was using now in his practice. He said it gave the best satisfaction, without the many disadvantages attending the use of the various batteries offered to the profession now. The cheapness and simplicity of it commended itself to everyone having use for the galvano-cautery. The paper was referred to the committee on publication. After answering a question propounded by Dr. Reynolds, the latter said, that he did not fully understand the paper, owing to a confusion of sounds, caused either by some acoustic defect in the room or the speaker's voice, he did not think however, that there was as much advantage in the instrument as claimed by the essayist.

Dr. Ray said, his difficulty was that he could seldom get his patients to consent

to the hot iron cautery, for they always attributed any bad results that followed to its use.

Dr. Mathews spoke at some length on the use of the instrument in the various forms of surgery, but had very little experience in surgery of the eye.

Dr. Wells, of Shelbyville, Ind., then read a paper on "Pneumonic Fever." The paper was been referred.

Dr. McCoy said, many of the gentlemen heard me on this subject yesterday. I have but little faith in abortive treatment. I believe in lotions, cold or hot, (according to the agreeability of the one or the other to the patient,) for the reduction of the temperature, which seldom fails,* while the essayist uses morphine to allay pain, I use opium.

Dr. Fletcher said, he was pleased with the paper, but had very little experience with the use of antipyrin in the treatment of pneumonia.

Dr. Bailey said, he liked the paper, and while it treated of the subject in a general way, it did not go far enough in noticing the various forms of the complaint. He thought credit had oftentimes been given to therapeutic agents, when nature was just about ready to repair the damage. He thought there was but little damage from apnea, but a great deal from exhaustion, or heart failure, and our treatment, he said, should be directed especially to that organ. He did not think the damage was always increased in proportion to the amount of lung tissue involved. He had no faith in the abortive treatment, and never seen a case aborted in a practice of thirty years. He thought it would generally run its course. He believed in frequent spongings and antipyretics. He said, there could be no active congestion while the blood was kept at the periphery. After the consolidation is complete he would rather send the blood to the lung, instead of drawing it away. He believed in the antipyrin and antifebrin for reducing the temperature, rather favoring

the latter. He thought the crisis a point to be carefully watched on account of heart failure about that time. He found great benefit from the administration of digitalis as a heart stimulant, and iodide of potas. for removing the exudation in the lungs.

Dr. Grant said, that Dr. Wells was obliged to omit reading much that was in his paper for want of time and that some of the criticisms were hardly just. He thought digitalis and the potas. iodide were the remedies "*par excellence*" in the treatment of the disease, where the lungs were filled with exudation, and exudation almost always followed inflammation. The supportive treatment with the ordinary remedies will often be all that is necessary to bring the patient through.

Dr. Cecil said, that he did not believe in the abortive treatment, but acknowledged that his faith had been shaken somewhat in the success of his friend Dr. Wilson, who claimed that he had aborted thirty or more cases. Those acquainted with Dr. Wilson, know that he is an expert in diagnosis. He might possibly be mistaken in one or two cases, but could he be mistaken in so many?

Dr. Burton said, that he had diagnosed cases to be pneumonia, when afterwards he was in doubt about it and thought he might possibly be mistaken; he did not think a case of pneumonia could be cured in a few days, but would usually run its course.

Dr. Wells then closed the discussion by saying, that he did not see why it was that some of his critics believed in the abortive treatment, while others again did not. He was compelled to give credit to certain remedies and treatments where good results invariably follow.

Professor Mathews, of Louisville, then read a paper on "The importance of the study of rectal diseases to the general practitioners." The paper was referred to the publishing committee, after which Dr. Bailey said, he would be glad to respond in behalf of the general practitioner, but before doing so, (he added humorously) that he

would like to ask the doctor, if in the case he mentioned, where a tooth was found imbedded in the rectum, there were any indications of the growth of a new set. (Laughter.) He thought the doctor had given us a most excellent paper and one that should inspire in the general practitioner a desire to increase his knowledge in this too much neglected branch of surgery.

Dr. Cook thought the paper was true in its suggestions and the subject worthy the careful study of the general practitioner, he thought as a rule they did not give the subject the attention it deserved; he said a patient came to him once with a very slight trouble, but one that caused him considerable alarm. On examination I found a small blood vessel ruptured near the edge of the anus. I have seen a great many cases that presented alarming symptoms, that on examination were found to be very trifling. In regard to reflexes, I have found female patients complain of serious pain in the uterus, when an examination revealed the true cause of trouble to be located in the upper portion of the rectum. In regard to cancer of the rectum a great many patients think if there is not severe pain, there is no serious trouble, but it is not accompanied by severe pain, unless the sphincter or its adjacent structures are involved.

Dr. Grant said, the reflex influence was greater than was supposed by the general practitioner and that he was seldom prepared with the necessary instruments to make a proper diagnosis. He thought the subject was not sufficiently understood by him, and as a general thing the most cases should be referred to the specialist at once.

Dr. Reynolds said he had recently a case of photophobia with hyperæmia of the conjunctiva which disappeared under Dr. Matthews' treatment for anal fissure.

Dr. Reynolds then read a paper on "Current Medical Literature," criticising the loose way in which the most of it is prepared for the medical journals. At the conclusion of his

paper, a motion was made to postpone the discussion until the reading of two other papers. Dr. Matthews opposed the motion and said it was too important to pass without discussion, the motion however prevailed.

Dr. Fletcher, of Indianapolis, then read his paper on "Toxic Insanity." His theory was that all forms of the disease may be caused by a poison in the body. He thought the fathers in medicine knowing but little of the abnormal conditions of the brain, treated the insane with a great deal of success. He gave the general symptoms attending the various forms of the disease, also a synopsis of treatment. He regretted that the paper was not as complete as he had desired to make it.

Dr. Wathen, of Louisville, then read a paper on "Hysterectomy," with a report of a case where the entire uterus was extirpated. He dwelt especially on the *technique* of the operation, comparing his own method with that of the most successful operators of this and other countries.

Dr. Peyton, of Jeffersonville, then read a paper on "Cirrhosis of the Liver and Kidneys." The last few papers were all referred to the publishing committee, without discussion, on account of the lateness of the hour. The society then adjourned.

The night session was called to order by the President, at 8 o'clock P. M.

Dr. Kempf, of Jasper, Ind., read a paper entitled "Shall the State take Care of Its Inebriates?" This paper was well received and elicited much favorable comment.

Dr. Orvis said he thanked the author of the paper and thought it ought to be published in more than our medical journal. He thought it the best paper that had been presented to the society.

Dr. Cook thought the paper an excellent one and regretted that it had not been read earlier in the session so that all might have heard it, and as the author said it was yet incomplete he would suggest that the author

be requested to complete it, and read it at our next meeting in June.

Dr. Charlton spoke favorably of the paper and thought it one of great merit and should be read by every one. He favored the establishment of a home for inebriates by the State as recommended by the essayist.

Dr. Burton was well pleased with the paper and thought it a move in the right direction. He said the State ought to take care of its unfortunates, and that this class was as much entitled to its care as any other. He thought that there should be no politics in it and that physicians should take the lead in the matter.

Dr. Shields said he appreciated the paper, but thought if the cause was removed the effect would take care of itself.

Dr. Shipman made a few remarks on the subject, commending the paper very highly and indorsed fully the remarks made by Drs. Burton and Charlton on the subject.

Mr. Cole said he thought the State should care for this class of unfortunates and hoped that some effort would be made to this end.

Mr. Carter also spoke and said he did not hear all the paper, but was interested in the subject, and closed by giving some statistics that looked very discouraging, and almost shut out all hope of accomplishing any good. He could not see that we were doing much in our present efforts to bring about such a desired end. He did not believe the stream could be stayed without first destroying the fountain. He closed by relating several anecdotes illustrating his position.

Mr. Baker also spoke briefly on the subject after which the President, Dr. Simpson spoke, doubting the practicability of the suggestions as set forth in the paper. He thought the paper ought to be withheld from publication and referred to the State Society for discussion and made a motion to that effect, but it received no second.

Dr. Kempf then closed the discussion,

relating a case of dipsomania that occurred in his own family, which was the prime factor in moving him to an investigation of the subject. He said he had given the subject the closest attention for several years and that he believed it to be as much a disease as insanity or any other nervous disorder. He thanked the society for the courtesy extended to him. The society then adjourned *sine die*. Thus closed the thirty-fifth semi-annual meeting of the Mitchell District Medical Association and one of the most successful in its history.

HYPODERMIC MEDICATION.	The occurrence of abscess from hypoder- mic injection, which
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was considered one of the chief sources of danger in the early days of this form of medication, may surely be prevented by using sterilized solutions and perfectly clean instruments.

In the *National Druggist* of January 1st., 1879, it is stated: "A pharmacist in Vienna has hit upon the idea of preparing small vials containing sterilized solutions for hypodermic use. All of the drugs ordinarily employed in this manner are put up in vials, which contain each one cubic centimeter of the solution. The bottles are drawn out and sealed by heat, so that when it is desired to use one the attenuated neck is broken and the liquid aspirated into the syringe. The advantage of this method of furnishing solutions is two-fold; the solutions keep indefinitely, and there is generally the proper dose contained in a vial. The quantity is always indicated upon one of the flattened sides of the container."

With ordinary care, in both the handling of the instrument and the making of the solution, no danger of infection need be apprehended. By absolute sterilization of both the fluid and the instrument must in all cases be secured to prevent the occurrence of abscess.

KENTUCKY

STATE

MEDICAL

SOCIETY.

The next annual meeting, it is announced by Chairman Foster, of the Committee of Arrangements, will be very largely attended by that unique class of specialists who are pleased to style themselves "General Practitioners." How strange it appears; every now and then complaint is lodged against the activity of specialists in the medical societies. When they unite to form Special Associations they are accused of threatening the continuity of the profession; of organizing factions; of arrogating to themselves superior knowledge; and, finally, of being a sort of degenerate set practitioners who move in the narrow groove of some specialty. The editor of PROGRESS has observed the curious and varied character of the accusations against specialism. From a careful study of the question it is apparent to his mind that the better class of specialists are, in fact, largely in the majority of the working members of all the regularly organized medical societies. He is opposed to the division of the profession, just as he is to exclusive specialism in medical education. A limited field of practice will alone afford time for the study of the whole range of medical literature. A thorough general medical education affords the only proper basis for the study of any specialty.

All practitioners in the ranks of the regular medical profession are specialists. Da Costa is as much a specialist as Keyser. Pancoast is as much a specialist as Goodell. Sayre is a specialist, so are Gouley, Flint, Loomis, and Baker. Now for the proof.

Da Costa is known to the medical world as a skilled expert. In what field? The diagnosis of general systemic diseases. Flint and Loomis are specialists in the same department; whilst Goodell is a gynæcologist, and Pancoast a surgeon exclusively. These gentlemen are commonly denominated general practitioners. It is the custom for

Da Costa, Flint, and Loomis to write about fevers, respiratory and digestive disorders, constitutional infections, not requiring surgical treatment. They do not discuss Potts' disease, nor the extraction of cataract. Their opinions in vaginal hysterectomy have not been heard in the societies.

It seems really that the profession of medicine should be divided into those who work and those who do not. It is apparent at the society meetings, as Dr. Wm. Bailey said last year, on retiring from the presidency of the Louisville Medical Society: "The working members of a society really represent about ten per cent. of its membership, the remaining ninety per cent. are either silent or devote themselves to quiet and unimportant criticisms of the work of their more active colleagues."

It will be a joyous day when the medical profession of Kentucky can unite in an effort to contribute the mite of each member to the common stock of medical knowledge.

The effort to secure this object at the next meeting should meet with universal approval, and the most active co-operation of everybody interested.

It is no time for complaint. The hour of necessity is upon us. The work of organizing the whole profession will require the co-operation of every member. Failure will bring disgrace to those who stay at home. The good name of Kentucky medicine demands the organized support of the entire profession. The law now provides the means for public discrimination between the regular physician and the quack. Those who enlist in the ranks are benefitted by becoming the acknowledged supporters of the honor and dignity of scientific medicine, as against empiricism and quackery. The broad domain of science no longer admits of evasion. The path of duty is plain. The people understand it, and the man who gets their patronage must do something to deserve it. The recently amended law regulating the practice of medicine in Kentucky ought to be rigidly enforced.

PROGRESS

A MEDICAL MAGAZINE ISSUED MONTHLY.

DUDLEY S. REYNOLDS, A. M., M. D., EDITOR.

THOMAS C. EVANS, M. D., ASSISTANT EDITOR.

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VOL. III. LOUISVILLE, JAN. 1889. No. 7.

TRULY NATIONAL.

A little bird has whispered to the editor of PROGRESS that all is not lovely in the Executive Committee of the great Congress of American Physicians and Surgeons which held its first triennial meeting at Washington, last September. It is even hinted that the portion of Professor Pepper's address which related some of the causes that led to the organization of this so-called Congress, will not appear in the transactions as it was delivered at Washington. That the Congress desired to have as little of the Western and Southern element as possible, was shown in more ways than one. The Society of Genito-Urinary Surgeons was admitted to the Congress on application; the Society of Obstetricians and Gynæcologists was denied admission on the alleged ground that it was not two years old, though the other society just mentioned was an infant just struggling for its first breath.

A little glance at the list of names of the members, however, displays the remarkable fact that nearly all of them live east of the Allegheny mountains. There are numerically more regular physicians practicing medicine west of the mountains than east of them. All the so-called National Societies are made up almost exclusively of physicians residing on the Eastern shore. The spirit of sectional

feeling which has led to this can be illustrated by an instance not many months old. Two gentlemen living in the West, each of them holding membership in one of the little clubs called a National Association, invited a neighbor to join. These gentlemen are all of them specialists, and the neighbor who was invited to join holds a very high place in the same specialty. His jealous rivals were the persons who invited him to join their society, each of them writing a very pressing note and offering to do all they could to secure his election, etc. A friend in the East becoming aware of the purpose to blackball the new candidate for membership, informed him of the true status of affairs, and he declined to permit his generous neighbors to present his name to the society; so that the little sensation which they had prepared, was nipped in the bud.

It ought to be known to all the world, that the pretended Congress and all the pretended National Associations represented there, are no more nor less than a small clique of eastern physicians, with less than four hundred sycophantic followers, organized for purposes of personal and mutual advancement. They are in fact, the enterprising advertisers in the ranks of the medical profession and nine times out of ten, they are not members of the American Medical Association, or any affiliated body.

In a country where there are more than sixty thousand regular physicians, a society which calls itself national, should certainly have more than fifty members, yet the rolls of many of these so-called national bodies, representing the late Congress, failed to display that many names.

MEDICAL

TEACHING.

Discussing the Bradshaw Lectures by Mr. Jonathan Hutchinson, one cannot avoid the suspicion that the Emeritus Professor of Surgery, in the London Hospital, is really trying to develop

an increased interest in a pathological collection with which he has long been intimately connected.

In 1881, the same lecturer delivered the annual address on Surgery to the British Medical Association, in which he pointed out the great value of maps, charts, models, pathological specimens, magic lantern views, and black-board diagrams as aids in the instruction of medical students.

Mr. Hutchinson has done a great deal to advance the cause of medical education as well as to enrich the science and ennoble the art of Medicine and Surgery in every department. He approaches more nearly to the standard of perfection in the mastery of the various branches of medicine than any other living man; and although we may not agree with him that museums have greater value than good libraries, yet his own great experience and attainments in teaching give to his opinions an exalted value.

The Bradshaw Lectures must therefore be looked upon as having a strictly technical bearing upon the question of medical teaching.

THE BRITISH
AND THE
AMERICAN
MEDICAL
ASSOCIATION.

In an editorial, on the British Medical Association, in the British Medical Journal, of December 8, 1888, Mr. Hart calls attention to the fact,

that nearly one thousand new members have been enrolled during the past year, which means an increase of that many subscribers to the Association Journal, which has now reached the very handsome figure of fifteen thousand.

With more than sixty thousand regular physicians practicing medicine in the United States, we should at least have for our own Association Journal as large, if not a larger circulation, than Mr. Hart has been able to secure for the British Medical Journal.

The financial condition of the British Medical Association may readily be appreciated from an examination of the balance sheet showing thirty-one thousand pounds sterling surplus in the Treasury. Notwithstanding the fact that many items of considerable expenditure were incurred the last year, embracing such items as the moving into the handsome new building on the Strand, the annual dues of members of the British Medical Association, which includes a copy of the Association Journal, are the same as in the American Medical Association. This Journal instead of being an incubus is, in fact, a source of handsome profit.

It is therefore plain that by good management of the affairs of our own national body, we shall soon be able to have our own building and printing presses for the publication of the Association Journal, and a handsome equipment for increasing the usefulness of the Association itself. There is now in the minds of many of the best men in the two countries, a sort of fraternal spirit of rivalry which may be noticed in all the Presidential addresses, in the reports of all the foreign delegations, and in the editorials of the official organs of the two great national bodies.

A PRESIDENTIAL
CENTENNIAL.

Mr. Elbridge T. Gerry, Chairman of the Executive Com-

mittee of the Celebration of the Centennial of Washington's Inauguration, has issued a circular announcing that it has been determined to hold the exercises in New York City, on the thirtieth day of April, 1889. It is proposed that on Monday morning, the twenty-ninth of April, the President and his Cabinet, the United States Supreme Court and many other United States officers shall leave Washington City by the same route pursued by Gen. Washington in 1789, on his journey to the City of New

York, to be inaugurated President of the United States of America:

On the arrival of the party at the foot of Wall Street, President Harrison and his suite, with other dignitaries of the Government service, will be met by the Mayor of New York City and a committee of escort.

In the evening a grand ball will be given in the Metropolitan Opera House. It is designed to have present representatives of the families of all the signers of the Declaration of Independence and other persons conspicuous in American history.

On Tuesday morning, April 30, it is proposed to hold brief religious services in St. Paul's Church, where President Washington, Vice-President Adams and the two Houses of Congress were present, a hundred years ago. Dr. Provost, the Bishop of New York and Chaplain of the Senate, conducted the services in 1789; Bishop Potter, of New York, will conduct a similar service April 30, 1889. Special services will be held in all the other churches of every denomination at the same hour. It is expected to have similar services in nearly every church throughout the Union.

The formal literary exercises will take place from the steps of the Sub-Treasury at Nassau and Wall Streets, at half past ten o'clock. Rev. Richard Storrs, of Brooklyn, will offer prayer. A poem by John G. Whittier and an oration by Hon. Chauncey Depew, another by President Harrison and a benediction by Archbishop Corrigan, is a brief outline of the services to be held. At twelve o'clock it is arranged to have a salute of twenty-one guns from the ships of war of every nation represented in New York harbor, and from the batteries of Castle William, Forts Hamilton and Wadsworth, after which a grand military parade will march past the reviewing stand on Nassau and Wall Streets, where the old Federal Hall of one hundred years ago witnessed the inauguration ceremonies of the first President of the United States. It is

desired to have in the military parade representatives from every State and Territory in the Union.

On the evening of April 30, a grand banquet will be given at the Metropolitan Opera House.

Interesting features of the celebration will be presented continuously throughout the whole brilliant series, and though no especially prominent part has been assigned to the medical profession, the spirit of patriotism, which should animate the mind of every American citizen, prompts the publication of this notice.

"GOOD FORM."

Brother Shrady, of the *Medical Record*, has been reading a work entitled "Good Form in England," from which he makes a few extracts as follows: "The profession of medicine is not one sought by gentlemen." Says Dr. Shrady: "It has been said one requires too much brains and ability. But whether that be the reason or not the "doctor" in England does not socially hold the position he does on the Continent, or in America. No doctor has ever been raised to the peerage. Successful medical men are knighted or made baronets. Brook Street in London, is the fashionable street where doctors live. Physicians do not have offices as they do in America. It would be "bad form" to speak of going to the doctor's office, his *house* is the proper expression. Physicians and surgeons always wear high hats, black in winter, and drab or white in summer, and always a dark or morning coat. This is the regulation professional garb. To call a surgeon a doctor would be very "bad form." No medical man should be called doctor, without his name being mentioned. Dentists have no social standing at all in England, and are never by any chance called doctor; they are all misters. Oculists are not much better, socially."

PUBLISHER'S DEPARTMENT.

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BROMIDES.

The profession has long recognized the value of the administration of various bromides in combination rather than any single one of the salts. In response to this demand the Peacock Chemical Company, of St. Louis, have prepared "Peacock's Bromides," an elegant and agreeable remedy, always convenient and reliable.

HAMMOND'S

SANITARIUM.

The success of Dr. Wm. A. Hammond's Sanitarium for Diseases of the Nervous System, at Washington, D. C., is already assured, as it opened on the 6th inst. with half its rooms filled with patients.

CASCARA

SAGRADA.

Notwithstanding the much talked of cascara sagrada famine, Parke, Davis & Co., have an ample supply on hand and will not take advantage of the market to raise the price, but still supply the profession and drug trade at the same price as formerly. To those wishing to make a further study of the drug they will mail working bulletins and monographs.

LISTERINE.

Listerine is a well-proven antiseptic agent—an antizymotic—especially adapted to internal use, and to make and maintain surgical cleanliness—asepsis—in the treatment of all parts of the human body, whether by spray, irrigation, atomization, or simple local application, and therefore characterized by its particular adaptability to the field of preventive medicine—individual prophylaxis.

CAMPHO-PHENIQUE.

The new antiseptic Campho-Phenique as manufactured by the Phenique Chemical Company, of St. Louis, is not merely a mixture of camphor and carbolic acid, but a chemical combination represented by the formula ($C_8 H_{11} O$). It is a local anæsthetic as well as antiseptic and may be applied to mucus membranes without pain or injury. Though the preparation has been on the market only a few months it is already recognized by the profession at large as one of the safest and best antiseptics.

PURE WHISKIES.

The physician is often at a loss to advise his patients where to go in order to obtain pure and unadulterated whiskies. Louis Zapp & Co., keep the best brands of whiskies, imported and native wines, mineral waters, &c. They pay especial attention to physicians' orders and are prepared to express goods to all parts of the country.

FERROUS

CHLORIDE.

The proto-chloride of iron has come to be regarded as one of the staples of the Materia Medica, but its disagreeable taste and its injurious action on the teeth have detracted something from its value. Recently, Renz & Henry of this city have prepared tablets of the "Ferrous Chloride," which completely obviates both the foregoing difficulties for which they deserve the thanks of the profession.

TONGALINE.

We are glad to note that the worth of the standard American preparations are appreciated abroad. The following letter will speak for itself:

During my stay in America I used TONGALINE wherever indicated with such excellent results, that I desire to learn if the preparation can be obtained in this country.

OTTO FRISONI, M. D., Ludwigsberg,
Württemberg, Germany.

PROGRESS

A Monthly Magazine for Students and Practitioners of Medicine.

"I HOLD EVERY MAN A DEBTOR TO HIS PROFESSION; FROM THE WHICH AS MEN OF COURSE DO SEEK TO RECEIVE COUN-
TENANCE AND PROFIT, SO OUGHT THEY OF DUTY TO ENDEAVOUR THEMSELVES, BY WAY OF AMENDS, TO BE A HELP AND
ORNAMENT THEREUNTO. THIS IS PERFORMED, IN SOME DEGREE, BY THE HONEST AND LIBERAL PRACTICE OF A PROFES-
SION; WHEN MEN SHALL CARRY A RESPECT NOT TO DESCEND INTO ANY COURSE THAT IS CORRUPT AND UNWORTHY THEREOF,
AND PRESERVE THEMSELVES FREE FROM THE ABUSES WHEREWITH THE SAME PROFESSION IS NOTED TO BE INFECTED; BUT
MUCH MORE IS THIS PERFORMED, IF A MAN BE ABLE TO VISIT AND STRENGTHEN THE ROOTS AND FOUNDATION OF THE
SCIENCE ITSELF; THEREBY NOT ONLY GRACING IT IN REPUTATION AND DIGNITY, BUT ALSO AMPLIFYING IT IN PROFESSION
AND SUBSTANCE."—BACON.

VOL. III.

LOUISVILLE, KY., FEBRUARY, 1889.

No. 8.

GENERAL MEDICINE.

CIRRHOSIS OF LIVER AND KIDNEYS.

BY

D. C. PEYTON,

M. D.,

JEFFERSONVILLE, IND.

Read to the Mitchell Dis-
trict Medical Society, at
Seymour, Ind., December
27, 1888.

I desire to report a case of cirrhosis of the liver and kidneys, one in which I consider there are some facts peculiarly inter-
esting to the profes-
sion at large, yet in reporting this case I shall endeavor to be

as brief as possible. A merchant, aged fifty years, has been a constant drinker for many years, but in the last few months has been drinking more than usual. He had been subject to nasal hemorrhages for several months, but a week or two prior to calling me he had had nose bleeding very frequently, and on November 14, the bleeding became so profuse as to greatly alarm his family. I was sent for and found he had lost a considerable quantity of blood. I proceeded at once to arrest the hemorrhage, which was from the right nostril only. I succeeded in arresting the flow temporarily and left for home, promising to return on the following day; but on the following morning, early, a messenger was sent post haste for me, stating that the patient was having another hemorrhage. On my arriv-
ing at his bed-side I found him bleeding slightly and rather weak from loss of blood. I again succeeded in checking the flow without much difficulty. I saw him again that afternoon and he had had no more

bleeding. On careful examination the liver was found very much contracted; some tenderness was elicited on pressure over the liver; he had had gastro-intestinal disturb-
ances for years; poor appetite, and the food occasioned distress, nausea and frequent vomiting; the urine was scanty and high colored; bowels constipated. I opened his bowels by the use of calomel in small doses and put him on a reconstructive treatment, hoping that the hemorrhage had at least been temporarily arrested.

I saw him again on the 16th; he had had no more hemorrhage of any consequence; was restless and had no appetite.

I saw him again on the 17th and found no perceptible change; and again on the 18th, when he seemed to be very much im-
proved. In the meantime he had had oc-
casional hemorrhages.

I called again on the 19th and found a change for the worse; had had several light hemorrhages.

On the morning of the 20th the family sent for me again. I found him bleeding profusely from the right nostril, which had weakened him very much, and it looked very much as if I would loose my patient from the hemorrhage; but I finally suc-
ceeded in checking the flow by the use of cold and pressure, etc.

The family were very greatly alarmed and asked for consultation. My esteemed and learned friend, Dr. Wm. J. Rodman, of Louisville, was called, Dr. Rodman fully agreeing with me as to diagnosis, etc.

When we reached our patient we found he had had another severe hemorrhage, and, to add to our anxiety, hemorrhage from the bladder came on, but this was only of short duration. Realizing the fact that he could not stand another severe hemorrhage, we decided to plug his nose, so preparing our plugs and saturating them in Monsell's solution, full strength, we plugged the right nostril. Before using the plugs, however, I had used all kinds of local applications; had injected Monsell's solution, full strength, and nothing seemed to check it for any length of time.

About this time a severe congestion of both lungs came on, which again threatened to destroy the life of our patient; but by the dry cupping and sitting him up in bed we were able to tide him safely over. The first plug was allowed to remain in the nasal cavity for about thirty hours, when, in a paroxysm of coughing he displaced the posterior plug and spit it out. When I returned and found the posterior plug out I removed the anterior plug, and as there was no indication of hemorrhage I did not re-plug; but on the following morning about five o'clock he had another severe hemorrhage. I had instructed the nurse that in case of a hemorrhage to call me without delay, so I was sent for and again plugged his nose. We removed the plugs in about twenty-four hours, and early on the following morning he had another hemorrhage, showing a very decided periodicity.

I again plugged his nose; this time we decided to leave the plugs until we were certain the bleeding had ceased. We allowed the plugs to remain about four days, and when the plugs were removed there was no more bleeding.

About the time we had succeeded in arresting the hemorrhages from the nose, heart failure manifested itself, and for the third time threatened to snap the frail thread of life of our patient. This complication required one of us to be almost constantly with him, but by the use of digitalia tablets

the $\frac{1}{200}$ of a grain (Flexner's), hypodermically, we were able each time to rally him from his apparently hopeless condition. They occurred mostly at night and were more severe at night. Their onset would be announced by cold hands and feet and sensations of chilliness and breaking out in a cold, clammy perspiration, but by the use of digitalia and dry heat we were always able to successfully combat the attacks. These attacks continued for nearly a week, and as we began to think him about out of danger of death from heart failure, uremia came on, and for the fourth time caused us to despair of our patient's life. For thirty-six hours he passed about three ounces of urine. On examination by Mr. Flexner the quantity of urea was found to be greatly decreased, about one-tenth what it should be in health; this continued for about two days; active delirium came on; we used the hydrobromate of hyocyn, hypodermically, which quieted him and gave him several hours sleep, but on emerging from its influence he was no better. We then ordered comp. jalop powder in teaspoonful doses, which acted freely, when his mind began to clear up; we then ordered the acetate of potash in half dram doses every two hours, which acted like a charm and started his kidneys to acting very freely. From that day to this he has had an uninterrupted recovery, and to-day is able to go to his store.

The especial features of the case to which I wished to call attention are the following, viz.: 1. The excessive hemorrhages and the difficulty experienced in arresting them. 2. The numerous complications, as congestion of the lungs, heart failure and uremia, and the various modes used in combating them. 3. The decided periodicity of the hemorrhages as shown by their occurrence of morning. 4. The wonderful amount of vitality of the patient, which enabled him to rally from so many complications, each of which threatened to cut short his life.

PNEUMONITIS.

BY

WM. A. MCCOY,

M. D.,

MADISON, IND.

Read to the Mitchell District Medical Society at Seymour, Ind., December 27, 1888.

Pneumonitis is an inflammation of the air cells and bronchiales, usually with more or less attendant inflammation of the bronchial tubes embraced in the diseased part. There is an

anatomical as well as a physiological difference between the bronchial mucous membrane and the membrane lining the air cells. This accounts for one having so little sympathetic disturbance when one part or the other becomes involved in an inflammatory process. This anatomical dissimilarity also explains the difference of inflammatory product of the two organs.

The disease attacks the right lung more often than the left; why this preference, I am not prepared to answer. It also prefers the lower lobe or lobes to the superior portion.

A feature worthy of note is, the nearer the apex of the lung the disease is located, the more dangerous, the upper portion being more vital than the lower.

The portion attacked, speedily becomes useless for respiratory purposes and so remains until resolution begins. We will have bronchial breathing during this time, as the air will continue to enter the bronchial tubes, but fails to enter the air cells, on account of the exudate with which they are filled.

This constitutes hepatization, more or less complete. In this condition the lung is not only heavier, so that it sinks in water, but is increased in bulk as well, so that the intercostal spaces may be made to bulge out, if a large portion of lung is involved.

The attack may be by one or more points in a lobe, and it may gradually diffuse itself through the lobe, but if another lobe is invaded, it is by a fresh point of attack.

Etiology.—I believe it is conceded by all authorities that vicissitudes of temperature are active agents in the causation of this

disease. Hence, we would expect it to be more prevalent in the winter and spring months, and so it is; but not to the exclusion of any other time or season.

It is claimed, too, but not proven, that the so-called malarial or periodical influences are active in its production, but I have not been able to satisfy myself that there is any pathological connection between the two diseases.

There are those too, who charge it to the account of the ubiquitous little microbe. But on that score, I have no opinion to express.

The question also arises, "is it a local disease, or is it systemic." This is a question I am not prepared to answer. The specific theory has some able advocates, but the argument is not all on their side. That a number of persons in the same house are attacked by the disease proves nothing, unless you can establish the fact, that no general causes are active, or that the family are not alike affected by them. If it is a specific contagium, why is it, it so seldom attacks more than one member of a household. But until the great leaders in pathological investigation and medical thought are agreed, I may be pardoned if I express no opinion; however, I am not yet prepared to subscribe to the specific theory, but am open to conviction.

Clinical History.—The anatomical conditions in pneumonitis naturally divide it into three stages. The stage of hyperemia or engorgement, the stage of solidification, and the stage of resolution. The first stage usually occupies from twenty-four to forty-eight hours, although it may vary materially either above or below these figures.

The stage of solidification or hepatization may not be more than a few hours long, or it may embrace a much longer period, but probably from two to four days may be regarded as about its usual duration.

The third stage dates from the beginning of absorption and continues till the lung is cleared up, and convalescence is established

or the case terminates by some other less favorable course.

We may expect an uncomplicated case of pneumonitis to terminate in from eight to twelve days, dating from the chill till the lung is clear. Complications may be expected to protract the case greatly beyond this time, if the patients strength holds out. The matter of endurance in certain cases determines the result.

The attack is usually ushered in by a chill, more or less pronounced, which may have been preceded by a day or two of malaise and indisposition. The chill will be followed and perhaps accompanied by elevation of temperature and pain in the side. The pain will usually be proportioned to the extent of pleuritic involvement and the location of the part of lung attacked; the nearer the superficies of the lung, the more acute will be the pain. But the degree of pain is not to be taken as an unvarying index of the gravity of the attack, some very alarming cases being attended by but little pain.

Cough usually attracts early attention, but is not always prominent. Indeed it may be wanting. It is attended at first by a whitish, viscid, frothy expectoration, but this soon assumes the characteristic rusty appearance, which may be regarded as almost pathognomonic of this disease. But this rusty sputa and indeed all expectoration may be absent. The respiratory acts as well as the cough, are suppressed, and respiration greatly hurried, altogether out of proportion to the heart's action. The respiratory acts will be thirty, forty, or more per minute, while the pulsations will probably not be more than one hundred, or one hundred and twenty, except in cases of great gravity. A high rate of pulse is always to be regarded as an indication of danger. Fever is also an early symptom. The temperature usually ranging from 102° to 104° and may reach 106° F. There is an evening exacerbation and morning remission. Delirium is not infrequent, but

in the absence of other grave symptoms, may not claim special consideration, unless violent or very persistent, and then it is to be regarded as a danger signal.

Physical signs.—During the first stage, we have a gradually increasing dullness upon percussion over the affected lobe or lobes, caused by the increasing exudate into the alveoli, which may continue until complete solidification is accomplished. We now have only bronchial sounds, breathing and fremitus. This dullness continues until the plugs in the air cells begin to soften and disappear, when vesicular crepitation will begin to re-appear. During this stage, the pain which at first may have been very acute, usually diminishes or ceases, and the sputa loses its rusty character, and is largely bronchial, the air cells and bronchiales being for the time off duty. The third stage affords many of the same signs we have in the first, but in reverse order, viz: increasing resonance and returning rales.

Pneumonitis is to be regarded as a grave disease, although in its simple and uncomplicated form it usually terminates favorably; but in its double form, in the aged, the infirm, in early childhood and the many complications liable to arise, it is very dangerous to life. I sometimes hear or read statements of men, relating the large number of cases they have treated, without losing a case. Now, one of two things obtains, either their cases are milder than mine, or they are more skillful in their management, for I am compelled to say, however reluctantly, that some of my cases do die, in spite of my most earnest efforts to the contrary.

Treatment.—The condition of the sick-room should engage our early attention. A regular temperature of about seventy degrees should be maintained, with free ventilation, carefully excluding all drafts. This being a disease with a definite course to run, uncomplicated cases do not usually require much medication.

The question of arresting or aborting the

disease, can apply only to the first stage, and then with small prospect of success. Full doses of quinia, twenty to thirty grains during a period of eight to twelve hours, are said to abort it occasionally.

There is another and more potent means at your command, which if your reputation is strong enough to bear defeat, may possibly arrest an occasional case, if used early and in well selected cases. I allude to venesection. I have no doubt we are losers on account of our timidity about resorting to it, owing to the popular outcry against it, both in and out of the profession. This clamor has had much to do in prejudicing the public against a valuable agent, not in this disease alone, but others as well, that might be modified if not abridged by its judicious use. The influence of the mind over the body is such, that it might not be best for our patient to bleed, in opposition to his opinions and prejudices, and those of his friends, even if we were fully satisfied such a course were best.

When a case is first seen, if the bowels have not been well cleared, it should be done at once, probably best by a saline. If temperature is high, antipyretics will be required. For this purpose frequent sponging with tepid or cold water, as best suits the patient, will often suffice, not only to reduce the heat, but to allay and tranquilize nervous excitement as well. If more active means are required, antifebrin is an eligible preparation. As an arterial sedative viratrum or aconite, are probably our best remedies in sthenic cases; but the aconite must be watched closely on account of its debilitating effect. In the asthenic type digitalis is to be preferred, and it may be demanded later in the case, on account of heart failure.

In many cases, liq. am. acetatis with spts. nitrous ether, given liberally, will meet this indication admirably. For the relief of pain, opium in some form may be demanded. If the stomach is retentive, Dover's powder is a favorite of mine.

Expectorants have but a small place in this

disease, as we will be likely to lose more on account of their ill effects on the stomach and digestion, than we will otherwise gain; inasmuch as a large portion, perhaps all the exudate will disappear by the way it came, and not by being coughed up. But if the cough be dry and the bronchial secretion scant, the chloride or carbonate of ammonium will most likely afford the desired relief. Counterirritants, as mustard and liniments, may serve a useful purpose in certain cases, in addition to impressing the patient and friends with the belief that something is being done.

However, we will occasionally meet with cases of tardy resolution, where a blister will do us genuine good service. But in the poultice we have a means that will seldom fail of accomplishing great good.

In order that any poultice may be an unmixed good, it must be perseveringly applied, and as heavy as can be well borne, in order that it may retain heat the longer, and thus obviate frequent changes and exposure of the chest.

Much depends upon our ability to discern the proper time to introduce tonics, stimulants and supportives generally.

Watch the case closely and be ready to meet complications and exhaustion on their appearances.

Much remains that might be said, as I have only in a manner hinted at the subject, but I must forbear. Before closing, I desire to emphasize this one thing: *Avoid routine treatment. Ignore the name, treat the condition, every case on its own merits.* This was very forcibly impressed upon my mind many years ago, by the now venerable J. Adams Allen, of Chicago. Some one asked him to give the best treatment for pneumonia. The Professor, in his own inimitable manner replied: "Gentlemen, that depends upon what is the matter."

The varieties of pulmonitis, and the variable stages of any one of these at the time of first examination, make the duties of the therapist critically difficult, hence the confusing varieties of drugs prescribed.

DYSENTERY.

Report of Thirty-Eight Cases.

BY

T. B. GREENLEY,

M. D.,

WEST POINT, KY.

Read to the Hardin County
Medical Society, Decem-
ber, 1888.

About the first of August, 1888, there was developed a great tendency to diarrhœa and dysentery in the vicinity of West Point, both on the Indiana side of the river, as well as on our side. There occurred in my practice during the months of August and September some thirty-eight cases of dysentery. Of these fourteen were under ten years of age, the youngest being a little over a year and the oldest sixty five years.

About 90 per cent. of these cases were preceded by diarrhœa, and one, the youngest, by cholera infantum. In a large majority of the cases the type of the disease was rather mild in character, there resulting only two deaths or 5.2 per cent.

These two cases, both children about two years old, I shall allude to again.

There was nothing peculiar in the phenomena presented by these cases except in one—a child of four years. During the second week entire suppression of urine supervened, which continued according to the statement of the parents about four days. When my attention was directed to the matter his mother informed me that he had not passed water for two and a half days. I examined the bladder and found it empty. The child was stupid, and really, unconscious.

I applied cups over the kidneys and put him on digitalis and niter, and it was thirty-six hours before he passed water. After the function of the kidney was restored he soon regained consciousness, but was somewhat stupid for several days. There were no spasmodic symptoms aside from the threatened coma. As a rule, in such protracted cases of suppression we have uræmic convulsions. The boy recovered.

The most protracted case of dysentery of the series was the oldest, a man of sixty-five

years. I think I visited him over thirty times. He had been sick several days when I first saw him, and was greatly prostrated from the loss of blood. I have never seen a case wherein so much blood was discharged. I measurably arrested it by large injections of hot water strongly impregnated with acetate of lead. Also used this medicine internally in conjunction with opium and quinine. I have found this plan quite effective in restraining the bloody discharges as well as to relieve tenesmus.

As a rule I think it advisable to exhibit quinine with other remedies in the treatment of dysentery during the summer and fall months, especially if there is much intermittent or remittent fever prevalent in the neighborhood. By this means you eliminate the malarial element of the trouble, which in some cases constitutes half the cure.

My treatment in general was on the sedative plan; dependent mainly on the symptoms present, and character of the discharges. If, as before remarked, there was much blood in the discharges accompanied with tormina and tenesmus I injected free quantities of warm water impregnated with sugar of lead, and gave at the same time internally, opium, quinine and lead, with a small quantity of ipecac; and in cases where there was fermentation or excessive acidity I gave either lime water or creta preparata. In some cases diarrhœa accompanied the dysentery, obviating the necessity of giving salts or oil as laxatives. In other cases the dysentery had entirely superceded the diarrhœa, when it occasionally became necessary to exhibit one or the other of these remedies. I prefer the glauher salts (sulphate of soda) and usually give it in teaspoonful doses dissolved in a teacup one-third or one-half full of mint tea, exhibited every two hours until it moves the bowels. In this way it acts mildly, the mint preventing any nausea or griping effect. In many of the cases there was but little rise of temperature, and the treatment

just indicated proved sufficient for their relief.

In other cases I used in combination with quinine and Dover's powder, either resorsin, salol or salicylate of ammonia. All of these remedies act as antipyretics, and I think, independent of this virtue have some tendency to do good in dysentery, not as germicides, but as alteratives on the secretions of the mucous membrane. I regard each one of them as an excellent antipyretic, and much safer than either antipyrin or antifebrin.

We occasionally meet with a case of dysentery which resists the ordinary treatment herein outlined, when it becomes necessary to resort to other measures. I have used several of the vegetable astringents, such as tannin, ext. pinus canadensis, hydrastis canadensis, ext. logwood, etc.

All of these have done good. These remedies are more especially applicable in cases where the disease is complicated with diarrhoea. But whenever fermentation exists it must be corrected with alkalies before the astringents will exert their proper effect. I have also had good results from the corrosive chloride of mercury when the disease has become chronic or assumed a tendency to chronicity.

The two cases which proved fatal as before remarked, were children about two years of age. The first, a boy, I saw previous to the development of dysentery, and my treating him for secondary syphilis at the time dysentery supervened, and thought at the time perhaps it resulted from the irritating effect of the specific remedy. The peculiarity of the manner of his getting the disease induced me to publish an account of it.* A woman who was affected with secondary syphilis, having ulcers in her mouth gave him a stick of candy that she was eating of. I thought the syphilis played a prominent part in causing death.

The second fatal case was a delicate child

who had been afflicted with diarrhoea some time before taking the dysentery. I only saw her a few times, the father reporting at the office and getting medicine. She was thought to be much better the day before she died, and was able to be up.

In the night I was hurriedly called to see her, the messenger stating she was dying. I found her cold, with feeble pulse, and great tympany of the bowels. In spite of everything I could do she died next morning. I could not satisfy myself as to the cause of the great accumulation of gas. I am inclined to think the gas was in the peritoneal cavity as I was unable to extricate any from the bowels. But this could only be the case on the hypothesis of intestinal perforation, which is unusual in dysentery.

JORDAN W.

LAMBERT.

The genial and accomplished head of the Lambert Pharmaceutical Company of Saint Louis, is dead. He was born at Alexandria, Va., 1852. Graduated at the Randolph-Macon College 1871. In 1873 he married Miss Winn, of Richmond, Va., and went to Saint Louis, where the great Pharmacal Establishment was founded in 1881.

Mr. Lambert was one of the most genial, refined and elegant gentleman in any cultured community.

He was a conspicuous figure at all the medical conventions for the past eight years. He was not obtrusive, but his companionship and opinions were sought by every committee of arrangements for conventions, banquets formal dinners, and, in fact wherever great executive talent and artistic designs in decorative art were needed, Lambert's presence was solicited.

The banquet of the association of American Medical Editors to their confreres from abroad, at Washington, September 3, 1887, was made one of the most elegant and successful ever held in this country, through the good taste and mature judgment of Mr. Lambert. We shall not soon see his like again,

* See Southwestern Medical Gazette, September number.

GENERAL SURGERY.

DIABETIC
GANGRENE.

BY
WILLIAM HUNT,
M. D.

Read to the Philadelphia
County Medical Society.
Stated meeting, Novem-
ber 28, 1888,

My young friend,
Dr. Charles B. Pen-
rose, who, at the time,
I did not know was
one of our directors,
told me not long ago
that he had a case of
gangrene in a negro
which puzzled him

and he gave me a few of the points. I said
“that man has sugar diabetes; test his
urine.” A few days after he crossed the
street to tell me that the man’s urine was
full of sugar. “Yes,” said I, unwarily, I
have seen and had under care quite a num-
ber of cases. “Then,” was the the reply,
“you’ll read a paper on it before the County
Medical Society, on the 28th of November,”
and straightway he whipped out his pencil
and put me down as engaged for that night.
Resistance was useless, and I promised to
open the subject for discussion to-night with
a record of my experience, and as much
as I might choose to add. I kept no close
notes of my cases, which I think is rather
an advantage for my hearers, as it saves
them from listening to much tedious de-
tail, and such detail is not the object of the
present discourse. Of course, it was neces-
sary to take a glance at the literature of the
subject. This is vast as to diabetes and as
to gangrene in general, but meagre and in
some respects surprising as to diabetic gan-
grene. There are about twenty pages of
the great *Index-Catalogue of the Library of
the Surgeon-General’s Office*, which is double-
columned as you all know, given to each
of the subjects of gangrene and diabetes.
You have to search sharply for anything
associating the two. The French seem to
have the best of it up to 1868. There are
but two monographs catalogued, one by
Giron, Paris, 1881, and one by Peyrot, a
student, 1878, who reports, I think, thirty-
nine cases; these are not in the College of

Physicians’ Library. The ten isolated cases
are reported in the French journals from
1856 to 1868; most of these are in *L’Union
Médicale*. I will give a brief summary of
these cases, most of the reporters of which
think they have hold of something very rare
and interesting, and you will not wonder at
this when you hear more of this literature.

1st. A case of phlegmon and gangrene
of the anterior and external region of the
right knee. Free incisions were made.
The patient was discovered to have inter-
mittent diabetes. There was recovery from
the local lesion.

2d. A patient known to be diabetic had
his right toe to slough; it was detached with
scissors. From this he recovered slowly.
He was placed on strict antidiabetic treat-
ment, but was careless and the whole foot
became gangrenous. There was great ab-
dominal pain, and necrosis of the gastric
mucous membrane was diagnosed; death
speedily followed; no autopsy.

3d. A diabetic of sixty years of age is
reported, who died from extensive gangrene
of the thigh and back.

4th. A doctor, aged sixty-five, fell down
from an attack of cerebral congestion;
never sick before. Diabetes was discovered.
This was on the 21st of the month; on the
25th great mortification took place involving
the cellular tissue deeply, followed by death.

5th. A man had a leg amputated for
what was thought to be senile gangrene.
He recovered slowly from this, then the
other leg was attacked, first at the toes.
He was found to be a diabetic.

6th. Another diabetic is mentioned with
spontaneous sphacelus of the right toe.

7th. A colonel with his right foot gan-
grenous died of diabetes. Other cases are
here and there mentioned with spots of gan-
grene.

8th. A man of seventy, after great pain,
had gangrene, first in left toes, then in right.
The disease was thought to be senile, but
he was found to be a diabetic. The ab-
sence of ammoniacal changes is noted in

this case, and the question is raised whether the urine of diabetics undergoes these changes.

9th. A case of complete destruction of the plantar aponeurosis by gangrene in a diabetic is reported with recovery from that lesion.

10th. A man of fifty-five, cut his corn—gangrene followed and diabetes was present; he died. He had before this no symptoms of diabetes—in fact, was never sick. He went through troublesome family affairs, which he felt deeply, some time before.

These patients where the sex is given were males. Mental troubles are more than once given as a cause. Intermittence in the appearance of sugar is noted in two cases. In fact, in one of them, the interne tells his chief, that he (the chief) had made a mistake. The interne had examined the urine when sugar was absent, but it returned in full. The majority of these cases were in the better walks of life. But the work worthy of a higher dignity of title than a monograph is by Marchal (de Calvi), Paris, 1864: *Recherches sur les Accidents Diabétiques et Essai d'une Théorie General du Diabète*. Some of his cases are among those quoted above.

Marchal claims to be, and with some force, an original discoverer. He places 1852 as the dividing line between the periods when, in the first, gangrene occurring during the progress of diabetes was regarded by all as a simple coincidence, and the second, when gangrene occurring among diabetics it is the result of inflammatory conditions dependent on the disease and due to the irritation of the peculiar products of it, which are thrown into the blood and tissues. This last is the so-called discovery as I understand it, and there is some discussion as to priority, for Hodgkin of London, about the same time, as we shall see, took the same view. Marchal was, of course, criticised by his own people, one of whom was Charcot. The cases, facts, and comments are divided into series, those

published before the discovery, and those published after it. The collection is really remarkable, both as to number and as to character of cases, and especially so when contrasted with German, English, and American reports and literature on the subject up to that time. Marchal's book has reports of one hundred and thirty-three cases of all sorts of what I may call extra lesions occurring during the progress of diabetes, collected both before and after the discovery. In the notice of three cases of Carmichael, Adams, and Marsh in the series before the discovery, these remarks occur: "The mention of these cases does not give place to any general deduction. The question to know is whether there exists a necessary relation between gangrene and diabetes, a question which appears to have been totally lost from view." Of the 133 cases, gangrene *per se* occurred in 57. The seats of it were, in the lower extremities 35, lungs 7, hand 3, pleura 2, shoulder 1. Nucha (not ordinary carbuncle) 2, nose 1 (necrosis). Plantar aponeurosis 2, ribs necrosis 1, forearm 1, back 1, gangrenous plaques 1—although the latter are reported in several other cases. I shall not pretend to particularize these cases, I refer any one interested to Marchal's book. My purpose is to show that gangrene in diabetes is something more than a coincidence. The extraordinary case No. xxxix., almost of itself sustains the position. A man of fifty-eight years, came under observation. The case is given in detail and is thus summed up by Marchal. "Thus in the space of six years from 1850 to 1856, the patient was attacked successively with first, a necrosis of the first phalanx of the second toe, which was amputated; second, with a sphacelus of the whole foot and inferior part of the leg of the same limb, which was also amputated; third, with a skin gangrene of the other leg which gave place to a callous ulcer; fourth, with a gangrenous inflammation of the base of the great toe, which left a deep and intractable ulcer; fifth, with a sphacelus of the first four toes,

which were also amputated." Through all this melancholy history, no suspicion of diabetes was raised until attention having been called to the case through Marchal's labors, the urine was examined and the man was found to be a positive diabetic, and he was proved to have been one for years. Other multiple cases are reported. This by no means exhausts the French literature. Verneuil, Nélaton, Lizé, Peter, Charcot, Demarquay, Peirot, Chauvel, and others have done their share in the observation of cases and in elucidating the subject. I will now take a short notice of German, English and American work in this line.

The great Index-catalogue I referred to is dated 1882, and in going twice over those thirty-seven doubled-columned pages devoted to diabetes and to gangrene, I found no monograph on diabetic gangrene in German. There is one case of it reported by W. Roser of Marbourg, and an article by him upon it in the *Medicinische Wochenschrift*, Berlin, for January 1, 1880. Billroth, in his *Surgery*, merely mentions diabetes mellitus a possible complication of gangrene. Hodgkin read a paper before the Harveian Society, session of 1852-53 (*Journal of the American Medical Association*, 1854, p. 915), and, aside from this, there is no notice of an English article or case in the index. I may have missed them, but I thought I looked sharply, else how did I find the French ones? There is one Italian case reported.

The Marbourg professor (Roser) grasps the situation thoroughly. He says: "When an otherwise healthy appearing man has a gangrenous or ulcerous disturbance, for example, on the foot or hand, when one can think of no infecting cause, when all irrigations with carbolic acid, etc., are in vain, it is *high time to think of diabetes.*"

He attributes the past failures of diagnosis and consequently of proper treatment, to three causes: First, to the fixed, classic, and preconceived notions as to diabetes, viz., that an otherwise well-looking and well nourished person cannot have it; that the

usual symptoms, thirst, emaciation, etc., must be present; so to say, a cachexia. (These points I can practically confirm as well taken.)

And what are we to think of this?

Second. In gangrenous destructive processes *now*, one takes it for granted that a rotting, generating, chink-fungus (literal, Spaltpilz) has got in from without and is the cause of all the trouble, and one is obstinately striving to stop or make impossible the vegetation of this chink-fungus and to control the advancing sepsis by still more obstinate applications of carbolic acid (he quotes carbolic acid as the type of the germicides, for he has u, s, w., in some places), and so long as one remains in this blind thought, he naturally seeks for no other etiology.

Third. Even when the diabetes is discovered, the doubt is set up whether it has anything to do with the gangrenous destruction, and then it is still more strongly doubted whether a treatment appropriate to the case, both constitutional and local, can mend matters where there is a high grade of diabetes. Cases are then given, some of which are taken from Marchal. A plausible explanation of some cases of otherwise unaccountable sloughing after operations, is suggested in the possible presence of diabetes. I came across some such cases. Roser supports Marchal's axiom, "One must always think of diabetes and examine the urine, when one has to deal with obstinate and repeated cases of furuncle, anthrax, diffuse phlegmon, gangrene or sphacelus, and the like affections." (This is all I shall translate, for I find there is a longer abstract from this article of Roser's in the *Chicago Medical Gazette*, 1880, vol. i.)

Since Roser's paper the Germans have paid more attention to the subject. I find in the *Annual of the Universal Medical Sciences*, vol. i. 1888 (a book which brings our literary knowledge of a subject fairly up to the present day), that in the *Centralblatt für Chirurgie* König "points out" what this

article shows has been long ago known, that diabetic patients are subject to a low grade of inflammation; and he issues the dictum, "that in all cases of spontaneous gangrene the urine should be examined for sugar, and in surgical complications of diabetes the first and most persistent treatment should be anti-diabetic." In the article upon surgical diseases in the annual, collated by Dr. Christopher Johnston, of Baltimore, an interesting case of diffuse gangrenous phlegmon in a diabetic is reported, and after some remarks and extracts as to the causes of the various gangrenes, this rather heavy quotation closes a paragraph: "The differential diagnosis is simplified since antisepsis has detached gangrenous septicæmia from the morbid coexistences which complicated its symptomatic category."

English and American literature on diabetic gangrene amounts to almost nothing. After Hodgkin's paper, 1852, the affection seems also to have been totally lost from view, and no one appears to have taken any especial interest in the subject. Hodgkin is the one with whom the question of priority was raised with Marchal. He reports several cases, one that of a young man who, after venesection for diabetes, developed an acute pneumonia. He died, and gangrenous softening was found surrounding tubercle. Another case, in an elderly gentleman, with symptoms of the same kind, no post-mortem. Two more with gangrenous feet. Then follows this important remark: "Reflecting upon the evident tendency of diabetes to impair the vitality of the tissues, I could not but attribute it, not to accident, but to an essential connection between the disease and the function of nutrition."

After this I found no monograph on the subject, nor no particular reports of cases in our language. They must exist, but I got tired looking for them, and at any rate I prove them to be rare. I searched some works on general surgery, including textbooks, and allow me to say in passing, that I do not allude to them in the spirit of carp-

ing criticism, but to show how this important matter has attracted such small attention. I also may have overlooked something, but here is the result. In only one of these books do the words *diabetic gangrene* occur in the index. This is in Ashhurst's *International Encyclopedia of Surgery*. They refer to six lines given to the subject by Professor E. M. Moore in his article on Gangrene and Gangrenous Diseases. Even the great *Index-Catalogue*, with much more insignificant headings about gangrene, has no heading *diabetic gangrene*. The subject is not noticed in any way by Ashhurst, Agnew in his first edition, or by Bryant. Agnew speaks of traumatic diabetes in injuries of the head, and Erichsen gives a case of a severe blow upon the back of the head followed by concussion and the rapid development of diabetes, but makes no mention of diabetic gangrene in his early editions, but has quite an extended notice of it in his last one. Agnew, whose attention of late years has been drawn to the subject through meeting with cases of it, writes about it in his second edition (vol. i. p. 192). Prof. S. W. Gross (late editions) gives us a short notice under the head of chronic gangrene, which he says "is occasionally associated with, if not directly dependent upon, organic disease of the kidney, especially that form of it which is attended with saccharine diabetes." And he refers to the elaborate observations of Marchal and Verneuil. Holmes Coote, in Packard's edition of *Holmes's Surgery*, in his fine essay on gangrene, does not notice it in any way, nor does his reviser, Dr. P. S. Connor.

So much for the surgeons. Pavy, 1862, makes no mention of gangrene; to be sure, his researches were mostly in different directions, although he alludes to other complications. Squire, in a short essay is equally silent. Dr. Tyson, our acknowledged expert in urinary matters, says: "Gangrene of the body is another of this class of symptoms: it is sometimes spontaneous, but more frequently is immediately caused by

some trifling injury, which under other circumstances would be without results. It has been known to start from a blister. The mode of origin makes it unnecessary to seek *any further immediate cause*, such as inflammation, degeneration, obliteration of arteries, etc. Beginning most frequently in those parts of the body most remote from the centre of the circulation, as the toes, its progress and appearances are like those of senile gangrene." Tyson also gives two passing notices to gangrene in his later article on diabetes, in Pepper's *System of Medicine* (pp. 205 and 210), and also in Sajous' *Annual*, where he quotes a case of gangrene of the penis in a diabetic from a French authority. His remark that the gangrene is *more frequently* caused by some trifling injury is not sustained by the histories of the reported cases. It is doubtless *started* in some, as we have seen, by such an incident, the place simply being determined by the injury. The differences from senile gangrene are also mostly well marked.

W. Roberts has quite a paragraph on diabetic gangrene in his work on *Urinary and Renal Diseases* (4th ed., 1885). He quotes Marchal, Hodgkin, and others. Niemeyer mentions it only as a possible complication. Fagge gives it four lines, and confines it to *one* of the lower limbs. We have seen how it may be multiple, and simultaneously or successively attack different parts of the body in the same person. Watson, quoting Garrad, mentions gangrene. Flint and Aitken speak of it as a possible complication of diabetes.

Whilst writing this, Schmidt's *Jahrbücher*, No. x. for 1888, comes to hand, bringing us up to October of this year. In it there is the latest general article on diabetes mellitus, a review, twenty-eight pages in length, by Dr. Louis Blau, Berlin. The paper opens with a list of seventy-four different articles on the subject from 1886 to date. Among the Americans mentioned are J. M. Da Costa and L. K. Baldwin. This catalogue gives the same experience as

the Index of the Library at Washington. Only three articles refer to diabetic gangrene, one by König, "A Revision of the Knowledge as to Capital Operations (Amputations) during the Progress of Diabetic Gangrene," and two cases (both French) of diabetic gangrene of the external genitals are reported.

Blau gives credit to König for confirming the frequent tendency to inflammations giving rise to gangrenous processes in diabetics. This (the gangrene) may appear to be spontaneous, but it calls for an examination of the urine if that has not been made.

He as well as König is a firm believer in these inflammatory gangrenous affections being dependent upon specific microbes, as do other incidents of diabetes. The easy passage into gangrene is favored by the less resisting power of the tissues than when in health, and, also, it may be, the presence of arterial sclerosis.

The diabetic is at a disadvantage with the sound man, in that there is a greater tendency in him to take up the microbes in his tissues and into their fluids, as these offer a better nourishing nest for the microbes. Compare König's with Roser's views. Roser ridicules the chink-fungi as the producers of the gangrene *in situ* and from without. And, agreeing with this, König gives them a nidus within from which to operate. This is but a repetition of what I long ago stated in an address before the Academy of Surgery in this city.

The reason that a sick man is at a disadvantage as compared with the well man is, that the former is a harbor for the products of disease (molecular necrosis). These products are the food of the bacilli, and where the food is *there* they go. They do not differ in this from all other organized creatures from man to microbe. How far they are the *causes* of diseases is the business of the mycologist to find out. But little as yet has been established as a *certainty*, and, therefore, it is all the more incumbent, in practice, to guard against

their possible presence and specific power. König thinks that capital amputations had better be let alone so long as the urine is rich in sugar. He also says there are cases in which the surgeon must be the judge. It may be worse to refrain from amputation, and thus let the patient contend with two serious conditions, the disease and the gangrene.

Thus you see that up to this time but little has been added to our real knowledge of diabetic gangrene since 1852, the days of Marchal and Hodgkin. The disease was there, the theories were there, the cautions and advice and treatment. All were present but the bacillus, and he was lurking in the dark. The surprising thing is that, as in the expression already quoted, the interesting and important subject should have twice "been almost totally lost from view."

After reading the review in *Schmidt*, I got the number of the *Centralblatt* which contains König's paper and read it. I have already taken most of the important facts from the reviewer. König has evidently gone over some of the same historical ground that I have done. He gives the French great credit for their researches and papers and reports. He quotes one of the latest French observers, P. Redard, upon "De la glykosurie éphémère dans les affections chirurgicales" (*Revue de Chirurgie*, 1886, No. 8 and No. 9, S). He reports two most interesting cases, one aged seventy, and one forty, occurring in 1886, both having diabetic gangrene and atheromatous arteries. He amputated a thigh in each case, under strict antisepsis. Both recovered rapidly, and there was a remarkable diminution of the sugar in both, and at times it wholly disappeared. He argues to himself in this quaint way: "During the past year I took the knife in hand, for I said to myself, 'if thou continuest to treat the case in this way (the expectant), the old man, upon whom his family depends, will go to the ground; to be sure, he may also

go to the ground after the amputation, but possibly he may live if antisepsis is strictly carried out.'" And live he did. He then issues his dictum, a process of which our friends abroad seem to be very fond: "When in diabetic gangrene, in spite of antidiabetic treatment constitutionally and antiseptic treatment locally, the general diabetic symptoms and the local phlegmonous appearances do not disappear or ameliorate, and a further perseverance in the treatment simply increases the danger for the patient, then a radical operation, in order to try to save the patient's life, must be performed. These operations will, as a rule, be amputations."

We will now leave the history and literature of diabetic gangrene and take up the records of experience with a few practitioners here at home.

I think any fair-minded person would say that, if we can develop so much in such a limited range of inquiry and in such a short time, and then ask himself what might be found out by further inquiry; not only among ourselves but throughout the country, diabetic gangrene is certainly something more than a mere coincidence of the disease diabetes. I sent out a small number of inquiries to physicians and surgeons in our city, selecting those whom I thought would know most about the matter, and also made personal inquiries of some. The questions were: 1. How many cases of diabetic gangrene have come under your notice or treatment? 2. What was the social standing of the patients—wealthy, medium, poor, hospital, or private—their ages and sex? The next question would appear to be rather a side issue, but it was made, in passing, to ascertain whether what is almost universally stated about diabetes is legendary, or is the result of carefully collated observation, it also bears upon gangrene of the pulmonary organs—it is: 3. How many of *all* of your diabetics had consumption, or died with it, and was there anything like gangrene of the lungs?

I received thirty answers including myself, of these, seven had seen no gangrene. They were Tyson, Longstreth, A. V. Meigs, Hutchinson, Packard, Sinkler, Keen. Twenty-five reported 64 cases, viz: T. G. Morton 13, Da Costa 5, Hunt 5, Agnew 6, J. C. Wilson 3, S. Solis Cohen 3 (two of them in consultation with other practitioners), Dr. Brush 4 (one case intermittent). D. F. Woods, J. H. Brinton, S. W. Gross, E. L. Duer, Murray Cheston, W. A. Edwards, J. W. Hearn, 2 each. John Ashhurst, Jr., Elwood Wilson, L. K. Baldwin, W. Osler, James Darrach, A. Fricke, W. F. Atlee, C. B. Penrose, J. H. Musser, W. B. Hopkins, T. K. Morton, 1 case each.

I was as particular as possible to eliminate double reporting; for example, cases seen in consultation, thus, D. Brinton saw one with Dr. Mitchell and myself; it is reported as one of my cases. Dr. C. B. Penrose is entitled to one more than above given, which one, as you have heard, was the cause of this paper, but it went into the hospital and so it appears in Dr. Morton's record. Dr. Weir Mitchell has seen several cases, I know, but having just returned from abroad he had no time to give a verified statement.

I was particular that the cases should be known by actual examination and record to be diabetic. Thus, Dr. Morton at first answered me that he had seen twenty or twenty-five cases, not knowing my object. I have no doubt that he has seen that number, for he and I have had our attention drawn to this matter for years, but he actually verified the thirteen in his list. Dr. T. R. Neilson was certain he had two cases to report from the Episcopal Hospital, but he found no record of sugar, so I rejected them. I mention these facts to illustrate the care that has been taken.

The ages, where given, were: 1 between 30 and 40; 2 between 40 and 50; 11, 50 and 60; 12, 60 and 70; 10, 70 and 80; 2, 80 and 90. One exceptional case of Morton's, a diabetic aged nineteen, in whom

gangrenous sloughing took place after a needle operation for cataract, is down, and one of S. Solis Cohen's cases was a young female. Of the sexes given, 24 were females and 25 males. Of social standing, where given, 16 were wealthy, 23 medium, 9 poor, and of these 6 were in hospital. Dr. Brush reports a most interesting case of a female diabetic aged forty, a lunatic. She had large ecchymoses on her limbs which became gangrenous; she died. The autopsy revealed a gumma the size of a large pea in the floor of the fourth ventricle. The seats of gangrene, where reported, are: Lower extremities—below the knee, 37; thigh and buttock, 2; nucha (not ordinary carbuncle), 2; external genitals in female, 1; lungs, 3; fingers, 3; back, 1; eyes, 1.

Had I allowed myself to include ordinary carbuncles and boils in the gangrenes, to which class they belong, the list would have been greatly increased.

We will now take up the third question: How many diabetics have consumption or die of it? Is it a legend?

Marchal says he has known of but few diabetics to die of consumption, but he is rather inclined to adopt the general view.

A pamphlet published at Oxford in 1745, called "Mechanical Inquiry into the Nature, Causes, Seat and Cure of Diabetes, with an Explication of the most remarkable Symptoms," says, if the patient be "too far advanced by a neglect of proper remedies, the person so affected in reality dies of a consumption."

Here are the answers to the third question. Dr. Tyson has notes of 55 cases in private practice since 1884. Of these, 18 have died, 4 of *consumption*.

Dr. Longstreth says a very large proportion die of pulmonary complications called consumption.

Dr. A. V. Meigs has notes of five deaths from diabetes, none from consumption, nor does he know of any consumption in those diabetics who have passed into other hands, nor, as I understand, of any in his father's

practice. Dr. James H. Hutchinson remembers one diabetic who died of consumption. Dr. Packard remembers none. Dr. J. Ashhurl, Jr., does not remember a consumptive. Dr. Sinkler: none of his few cases died of consumption. Dr. Da Costa does not remember a case of gangrene of the lungs, but has seen a sufficient number die of phthisis as to believe in the generally held opinion. Dr. Agnew has seen no consumption; one of gangrene of the lungs. Dr. Elwood Wilson does not remember a death from consumption.

Dr. J. C. Wilson can not answer as to consumption, thinks it not so common as supposed; seen one case of gangrene of the lungs. Dr. D. F. Woods, has had no consumption deaths. Dr. L. K. Baldwin, one case complicated with consumption. Dr. Osler, two died of consumption, one of gangrene of lungs. Dr. Darrach, no consumption. Dr. S. W. Gross, none. Dr. Keen, none; Dr. Albert Fricke, none; Dr. J. H. Brinton, none; Dr. Hearn, none; Dr. Hunt remembers one poor woman in the hospital who was said to have consumption with diabetes. Dr. Brush, one phthisis death, and reports one lady of seventy-one, three of whose family had consumption; she escaped it. Dr. F. G. Morton, one; Dr. W. A. Edwards, none; Dr. Murray Cheston, six cases, no consumption; Dr. W. F. Atlee, none; Dr. T. S. K. Morton, none; Dr. Musser says he knows the cause of death in nine cases. None of phthisis.

Thus among all the diabetics noted by the practitioners mentioned, and we do not know how many are included, but certainly the 55 of Tyson, the 64 of my collection, the 9 of Musser, and 16 non-gangrenous ones specified by 7 others, in all 144, we find but eleven deaths from phthisis. And yet Dr. Thomas S. K. Morton in an essay on diabetes has somewhere picked up a statement, from an authority whose name he has missed, that 43 per cent. of diabetics are killed by phthisis sooner or later. Roberts, 1885, says that one-half of them

die with cough, catarrh, phthisis and other lung complications, when prolonged to the third year, and Aiken quoting him, evidently in mistake, says to first year. Dr. George B. Wood says, "In the great majority of cases the patients die of phthisis." Drs. Da Costa and Longstreth, whose opinions are entitled to great weight, make general statements in their answers. Dr. Longstreth cautiously stating it is *called* consumption. From a conversation with Dr. W. Pepper, who gives no return, he adopts the consumption view, and Dr. J. Cheston Morris coincides.

S. Solis Cohen says: "I can not find accurate statistics as to consumption. Think at least one-third of the cases that I have seen, died of pulmonary affections." Griesinger, quoted by Niemeyer, says "one-half of the cases die of phthisis." Watson says, "some think phthisis universal in diabetes, but it is not so." Flint, quoting Ogle, reports fourteen cases, with deaths from scrofulous or tubercular disease in seven of them. Niemeyer says "that pulmonary tuberculosis hastens the fatal issue." What one of latest authority, C. Hilton Fagge (1886) says, is important: "Diabetes is frequent cause of a phthisis" (almost the 1745 expression), which is peculiarly pneumonic in character. Its relation to ordinary pulmonary disease is still doubtful," and after giving certain facts he says, "hence it supports very strongly the opinion that the pulmonary affection in the disease is not of a tubercular origin." He kept notes of the diabetic deaths in Guy's Hospital and in twenty years out of 40 such deaths 17 died of phthisis. You will notice how indefinite and general some of the statements above given are, without figures to sustain them. Blau, in his review in the late number of *Schmidt's Jahrbuch*, already quoted as to gangrene under the head of "diseases of the lungs in diabetics," says, in substance, "that the question whether so-called diabetic phthisis is the same as ordinary tubercular disease of the lungs is only to be set-

tled by the proved presence in both of the same bacillus." Authorities, Inmérman, Rüttimeyer, von Merkel and von Leyden, are quoted as having observed absolute difference between the two diseases both from examinations of sputa and also by post-mortem. A case is given in which during life the patient had all the symptoms of tubercular phthisis. Except that bacilli were not found in the sputum, and at the autopsy the appearances were totally different from those found in that disease, and these appearances are noted in the text. The bacillus tuberculosis was nowhere found. A case having almost the same post-mortem appearances as this one is reported by Da Costa in the *Philadelphia Medical and Surgical Reporter*, vol i, page 8, January, 1887. The bacillus, as in the preceding case, was absent.

This record, considering the large number of consumptives in communities like ours would seem to show that the cases in point *are consumptives with supervening diabetes, and not diabetics with supervening consumption*. I leave the question for wiser heads to determine. Diabetics die, as my inquiries and experience confirm, with coma, oedema of the lungs and exhaustion.

I said I would not trouble you with the minute particulars of my own cases. To do it, would not add to the general knowledge of the subject, but I will sum them up and relate, I think, some interesting points. I have nine cases to speak of, five of whom were gangrenous, and three rapidly advancing toward it when death overtook them. One was peculiar and unverified; all are dead; one was in medium circumstances, all the others decidedly wealthy. The ages ranged from fifty to ninety-three, four of them being above seventy, five were women, four men. In none of them was the classical emaciation present at any time. The disease was intermittent in two. The urine in one of these cases would range as low as 1010 specific gravity, with slight traces of sugar, and then advance to 1030—

1035 with evidence of abundance of it. I took a specimen of this low gravity urine to Dr. Casper Wister, of the Mutual Life Insurance Company of New York. He tested it himself and was much surprised, and concluded not to accept statements of "no sugar," founded upon specific gravity alone. Another case also ranged from low to high at varying times, but not so marked as the first.

This teaches us not to be too sure in saying, as we all often do, "there's no use looking for sugar in that," when the gravity is 1020 and under. Austin Flint, Jr., reports a diabetic case with gravity at 1011 1/2. The seats of the gangrene in five of my cases were, foot and leg below knee, three; thigh and buttock, one; nucha (not ordinary carbuncle), one.

Gangrenes, as a rule, are generally of the soft or humid kind. This, however, depends much upon the part involved. Where the tissues are succulent the gangrene will be also of that character; where they are composed mostly of skin, tendon, and bone, they will approach the senile gangrenous in appearance. The remark made by Holmes Coote is also applicable. He, speaking of the terms used in the descriptions of gangrene in general, as dry, moist, etc., says, "when death of a part takes place rapidly, the vessels still contain blood and the usual fluids, and the mortified parts are moist and soft. When on the other hand the death is slower, there is usually a deficiency of the supply of blood; the vessels become empty and the part hardens and withers." There is this distinctive difference between the diabetic and the senile gangrenes according to my observation. The former rarely or never present the clear-cut line of demarcation between the dead and living parts that is characteristic of the latter. This fact, with the want of the decided dryness and shrivelling of the senile variety, should suggest the diabetic form, but in any case the urine should be examined.

I have this interesting observation to make about one patient:

A lady, aged ninety-three years, who did not have gangrene. This past summer she was in more than usual good health. I know positively she has had no diabetes until shortly before her death; not only from the want of rational symptoms, but also from recent examining of the urine. I went with her to Newport in June, and left her there. In passing through Newport in the latter part of July, I saw her; she was perfectly well, and her delight was to drive twice a day. I was at Bar Harbor in August, and received a telegram asking me to come at once to see her at Newport. She was dead before I arrived, and I learned from Dr. Cleveland of New York, who attended her, that she was sick but eight days, an *acute* diabetes, which rapidly proved fatal. I had no hesitation in saying, that had she survived the first fierceness of the attack, she would have had to contend with gangrene. The opinion was given, not because of her age, but because of the diabetes.

Sugar in the urine has been developed by falls upon the head, and also in certain forms of apoplexies, but I have just made a, to me, most interesting observation. I wish to know if any of you have made one like it, for I find none such reported.

In January, 1885, a wealthy gentleman, a long-time patient of mine, of most vigorous constitution, then seventy-six years of age, had an apoleptic seizure, from which he reacted, and finally settled down into a chronic semi-paralytic. On the 9th of this November, 1888, in the evening, I was suddenly summoned to see him by his son-in-law, a physician. He was comatose, face very much flushed, temperature 103° , pulse, 120, and had Cheyne-Stokes respiration. There was no increase of paralysis of the extremities. Basic effusion was diagnosed. Under treatment he improved and was very much better by morning.

His urine during his sickness had been

repeatedly examined, and with the exception at times of slight traces of albumin, there was nothing abnormal. On my morning visit, mindful of the symptoms of the night before, I proposed an immediate examination of the urine. This was done, and decided sugar reactions were produced by fresh Fehling solution.

Here was auto-physiology. Temporary pressure upon, and disturbance of the respiratory centres, and also pressure upon the diabetic regions of Bernard. As the effusion disappeared with the mending of the patient's condition, the sugar has gone with it, and now the tests give no traces of it. It will be interesting in this case if the patient survives, to note both as to sugar and as to gangrene.

I had written thus about this case when I had occasion to make another note. I saw the patient daily for four or five days, when it looked as though matters were about to resume their old course, and I made the next appointment two days ahead. But on the 15th I was summoned again. The patient was in deep coma, breathing sixty per per minute, pulse 150. *The urine gave sugar reactions more decided than before.* Respiration could be stopped by reflex at once—that is, by any peripheral irritation about the mouth or thorax. This would occur on an attempt to give liquids, then after a few automatic adjustments, the breathing would go on as rapidly as before. Within two hours death took place. There was no filling of the bronchi with mucus. The patient simply stopped breathing. Pressure on the pneumogastric centers was profound. It was a quick and permanent application of the air-brakes.

In practice we all have our puzzling cases. Some we clear up during the life of the patient, while others die, and, it may be, not until long afterward does the knowledge come to us of what probably was the matter. Some similar case, or some reading or discourse may give us light. I recall one such case in the direction of the present pa-

per. A distinguished, wealthy lawyer was attacked with an obscure disease. It was rapidly fatal. Dr. James Darrach was the physician, and I was sent for in consultation. It is not necessary to give the details. I can not remember whether the urine was examined; certainly, I think, not for sugar. Symptoms of sepsis were marked, and among the incidents there was enormous swelling of the abdominal walls, both anteriorly and laterally. I made free and deep incisions into the flanks, and from the cellular tissue mephitic gases and fluids, like those that flow from moist gangrenes, came in abundance. I think, in the light of what has been developed in my researches, that that patient died from an acute attack of diabetic gangrene.

There was no consumption, or even a suggestion of it, in *any* diabetic of whatever kind that I have seen, except the one I vaguely remember, which I have already spoken of as being in the hospital when I was resident. I now submit, from what we have heard, whether among all the gangrenes mentioned in books and indexes, viz., traumatic, hospital, senile, symmetrical, spontaneous, puerperal, visceral, infantile, congenital, cutaneous, mephitic, spreading, exanæmic, arterial, static, dry, wet, moist, humid, white, etc., the much-neglected diabetic gangrene should not be included? We have seen that *diabetic* gangrene makes, with good reason, higher pathological claims to notice than most of the kinds above given.

It is rash to make assertions. I, however, will say I should not be surprised to find after thorough investigation, that in *numbers*, in civil practice, diabetic gangrenes would be found to hold the second place, traumatic gangrenes, including those from frost-bite-burns and scalds, only exceeding them.

A few remarks upon the proximate and remote causes of diabetes which also have a bearing upon the production of gangrene. We have seen that diabetes is no disease of

the poor in general. Drs. Tyson, Morton and Darrach will give you some interesting facts about this.¹ I also have a good instance to add, illustrating the enchantment of distance even in science. Last Sunday, I was speaking with Prof. Penrose on this matter of the poor and the rich, when he said, "And yet I don't know, Hunt; you remember the cases that used to be in the hospital when we were residents, and the work done in studying them under Drs. Wood and Pepper?" I remembered all that, but did not remember the number of cases. I kept my own counsel, and next day I went for the record. The number of diabetics, as such, that were admitted into the hospital during Dr. Penrose's residency, 1851—53, two years, were just *three*; so, in the lapse of time, much work over a few cases is translated into the same work distributed over many cases.

From 1842 to 1888 inclusive, a period of forty-seven years, *fifty-nine* cases of diabetes were admitted into the hospital, an average of 1.28 cases per year. From 1842 to 1848 there was not a case; from 1858 to 1869 there was not a case, and in the first part of this time the Pennsylvania Hospital was practically the only hospital in our city for the respectable poor to go for treatment. Thus, from the wealthy and middle classes of this community, I have brought to light more than twice as many cases of diabetes,

¹ In the discussion which followed this paper, Dr. Tyson said: "In regard to the infrequency of diabetes among the poor no better proof could be given than the fact that in the Philadelphia Hospital, in which more than a thousand patients are present at one time, it will often be impossible for weeks to get a case for lecture." Dr. Morton also stated: "An inquiry recently made of the superintendents of our State hospitals for the insane shows that although more than twenty thousand patients belonging to the indigent class have been under the care of the present medical officers of these hospitals, there has not, it seems, been a single case of diabetic gangrene in the institutions at Harrisburg, Dixmont, Danville, Norristown or Warren." Dr. James Darrach said: "Dr. Hunt has mentioned that diabetes is a disease of the well-to do, and referred to the rarity of the disease in hospital patients and among the poor. This would appear to be corroborated by the statement of Dr. Jordas, who states that in an aggregate of 22,735 admissions into, I think, four hospitals in Lisbon, there was not one case of diabetes; and of 5700 deaths in 1862, four only were from this cause."

most of them recent, as have been treated in the Pennsylvania Hospital for fifty years.

Diabetes seems, in its affinities, to be more nearly allied to gout than to phthisis. One of Dr. Cheston's gangrene patients was a man over six feet high, weighing 250 pounds. He was a waiter in a private family, and surrounded with all the accessories of wealth. I could not establish that excess in the use of wine or strong drink had much, if anything, to do with the production of diabetes. A diabetic drunkard is rare; I have never seen one. I think, however, that over-feeding plays a much more important part as a proximate cause. Aside from the boulimia that is often an accompaniment of the disease, it will be found that most diabetes are over-eaters in habit. I know that most of my patients were, to say the least, good feeders, and some of them excessive ones, and one was noted in this way. Well-to-do people, in times of peace and plenty, eat too much. The laboring classes may eat as much in quantity, but they work it off. Excess in food clogs, excess in drink crazes; so the former habit has the advantage in morals, but which kills most is a question.

I shall only glance at the theories of diabetes. Faults of the nervous, vascular, and visceral systems have been, respectively by some, and *all* together by others, considered to be at the bottom of the trouble. I incline to deranged vaso-motor effects (stasis or paralysis of the vessels, with or without atheroma or arterial sclerosis) as most explanatory. What better fact could we wish to sustain this position than the influence of the disease on virility, a condition almost absolutely dependent upon normal vaso-motor function? Men with diabetes are mostly impotent; Marchal says, always so. He gives some strange cases of marital infidelities, such as unfortunate charges of infidelity by wives against their husbands, when really the poor fellows were helpless diabetics. One of these is described as a

veritable athlete, and he was an example of the fact, that in this disease great and peculiar strength in one direction may for a time coexist, with great and peculiar weakness in another.

The knowledge of diabetes is ancient, and, in looking over the old records I thought that I might stumble on one of diabetic gangrene, but in this I was disappointed.¹

A TART

CHALLENGE.

Dr. R. Stansbury Sutton, of Pittsburgh, offers Dr. E. S. McKee,

of Cincinnati, \$1,000 each for removing fibroid tumors of the uterus by the method of Apostoli. With the conditions named, Dr. McKee cannot accept, but announces his willingness to accept under other conditions, which Dr. Sutton may possibly agree to. Now, this is the sort of test to make; let Dr. McKee verify his statements by all means, and let Dr. Sutton have a chance to acknowledge the corn.

Mr. Knowlsley Thorton, of the Samaritan Hospital of London, wrote a letter about a year ago to the editor of the British Medical Journal, expressing his disbelief in any curative results by the Apostoli method. We have all been anxiously looking for clinical reports, but they have, so far, appeared only in general terms without any circumstantial accounts of cases.

The country anxiously awaits the results of the challenge.

¹ Coincident with the reading of the proof of this paper, I received a copy of the *Berliner klinische Wochenschrift*, No. 47, November 19, 1888. It contains the first part of an article by Dr. Max Schueller, of Berlin, called "Ein Beitrag zur Kenntniss der phlegmonoosen und gangranoenen Processe bei Diabetes." The author also intimates that gangrene, etc., is more than a mere coincidence in diabetes. He says: "While many cases of glycosuria, as, for example, those following experimental researches upon and injuries of the central nervous system, have found an essential clearing up, the relation between pus formations, furuncle, carbuncle, gangrenous process, and glycosuria is still quite dark. The view that these cases are essentially only complications of an unrecognized diabetes has still its adherents. I now have nothing new to offer as explanatory, and will consider this part of the subject no further."

EYE, EAR AND THROAT.

DISTINCT AND
INDISTINCT
VISION.

BY

JAMES JURIN,

LONDON.

An appendix to "a compleat
system of opticks,

BY ROBERT SMITH, L. L. D.,

Professor of Astronomy and
Experimental Philosophy,
at Cambridge, and Master
of Mechanicks to his
MAJESTY." Cambridge,
1738.Continued from November
Progress, Page 223.

95. When the *radius of dissipation* is equal to the diameter of the *true image* of the circular line, the central spot will then be equal in breadth to the *true image*, and eqal in breadth to the *penumbra* encompassing the central point.

For $g-r$ the radius of the spot will now be equal to $2r-r=r$, and its diameter will

be $2r$ equal to the breadth of the *penumbra*.

96. The central spot we have been speaking of, does sometimes appear of a purple color, instead of black.

This, I think, happens for the following reason: At the time of this appearance, the *radius of dissipation* exceeds the radius of the *true image* by a little more than the breadth of the circular line, as in Fig. 49, where ABD represents the circular line, and $Cfgh$ represents the *circle of dissipation*, which takes in a narrow ring of white paper beyond the circular line.

This ring of white will therefore throw a portion of its light upon the central spot, which portion of light being the farthest dissipated from the centers of the pencils in the white ring, must consist of the least refrangible rays, or the red rays. But this red, mixing with the bluish black of the central spot, must exhibit the appearance of purple.

97. When this central spot begins to appear, if the eye continue attentively fixed upon it, or if the sun break out of a sudden from a cloudy sky, or if at night a candle be snuffed so as to burn more brightly, in any of these cases the spot will disappear and a small white circle will appear in the room of it.

For in all these cases the pupil contracts to a narrower aperture, and the *radius of dissipation*, which is always proportional to that aperture, is thereby lessened, so that this radius, which at first was equal to the radius of the *true image*, now falls short of it, and consequently there must appear no spot, but only a small white circle, by Art. 92.

98. The circumference of an oval will exhibit much the same *phenomena* as the circumference of a circle, and for the same reason. Only the central spot will now be oval, and when there is no central spot, the *penumbra* will be stronger in the more concave part of the oval than in the less concave part.

The oval A will appear as B , or C , Fig. 50.

99. From the preceding articles it is easy to see the reason why a book of a small print, held very near the eye appears quite confused. For, as the letters therein conflict either of lines parallel to one another, as m, n, il, it , &c, or of lines inclined to each other, as v, w ; or of circular, or oval, or partly oval lines, as o, c, e ; or of a mixture of some of these, as b, d, p, q ; it is plain from what has been above delivered, that when viewed very near, they will not only form large *penumbrae*, so as to render them ill-defined, but will exhibit the appearance of foreign lines formed by the union of these *penumbrae* between the parallel or inclined lines of the letters, as also central spots in the circular, or oval, or mixed letters, so as to render the true shape of the letters utterly confused and indiscernible.

100. But a print considerably larger than that of the preceding article, when viewed at the same distance, will not be attended with the appearance of these foreign lines or spots, because the *penumbrae* will not now meet in the middle, the space being too great between them, and consequently the letters will appear only ill-defined and somewhat indistinct, but not confused.

101. If the small print be viewed at a distance somewhat greater than in Art. 99, it will now appear only ill-defined and somewhat indistinct on account of the *penumbrae*: But it will not appear quite confused, since it is not now attended with any foreign lines or spots, the pencils not spreading far enough for the *penumbrae* to coincide from opposite sides and thereby to form those lines or spots.

102. If the larger print be viewed from the same distance with the smaller in the preceding article, it will appear less indistinct than the smaller for two reasons:

1. The lines being thicker will make a stronger appearance in the middle, by Art. 71, and this will in some measure efface the *penumbra*, especially towards the edge where it is weakest, so that the whole *penumbra* will appear both fainter and narrower, and consequently will take up less of the void interval between the strokes of the letters than in the smaller print.

2. That interval is in itself larger than in the smaller print, and consequently appears more conspicuous and thereby shews the strokes of the letters more separate and distinct from each other.

103. If the two prints be viewed at a distance still greater, the *penumbrae* will grow less, so that the smaller print will appear but little indistinct, and the greater not at all so, for much the same reasons as were given in the preceding Articles.

And in this case, as the eye perceives no indistinctness in the larger print, this sort of vision, although, on account that the rays of a pencil are not accurately collected into a point upon the *Retina*, we call it imperfectly distinct, can not by the sense be distinguished from *Perfect Vision*.

104. We have hitherto considered *Perfect* or *Distinct Vision* only upon the foot of a given disposition of the eye, in which case it has been shown that *Perfect Vision* depends upon the distance of the object solely, and that *Distinct Vision* depends upon the distance and magnitude of the object jointly.

It remains to consider how either of these sorts of Vision may be procured by a change in the disposition of the eye, and here some very curious points offer themselves to be discussed.

I. Whether *Perfect Vision* in a given eye is confined to one determinate invariable distance, or may be obtained at different distances by a change in the conformation of the given eye.

II. Within what limits these different distances are comprehended, or what is the greatest and least distance at which *Perfect Vision* can be obtained in a given eye, by changing its conformation.

III. What is that change, which is made in the conformation of the eye, in order to obtain *Perfect Vision* at different distances?

IV. By what means Vision, when it can not be *Perfect*, is rendered *Distinct*, or at least not so indistinct as it would otherwise be?

V. What change is made in the eye, either by habit and custom, or by our growing into years.

VI. What is the least object, or angle, that the eye is capable of perceiving.

Of all these I intend to treat in their order.

I.

105. In the first of these points all authors, that I know of, agree together, except only the famous Mons. De la Hire. He is of opinion,* that there is no accurate collection of the rays of a pencil into a point upon the *Retina*, that is, no *Perfect Vision*, except when the object is at some one determinate distance suited to the eye of the observer. The others maintain that the distance of the object may vary, and yet the rays of a pencil may be accurately united upon the *Retina*. The experiment upon which Mons. De la Hire founded his opinion, has been briefly related in the *Remarks*, Art. 15, &c., and the insufficiency of his argument drawn from that experiment has been fully shown. The same

* Traite dei differens accidens de la Veue.

OBSTETRICS AND GYNÆCOLOGY

OBSTETRICAL
SOCIETY OF
PHILADELPHIA.

Reported for PROGRESS

BY

J. M. BALDY,

M. D.,

Secretary.

Thursday, Dec. 6, 1888.

Dr. Wm. Goodell showed a recurrent intraligamentary cyst, removed without entrance into the peritoneal cavity.

The patient, a lady of thirty-one, at the age of eighteen had an ovarian cyst re-

moved by Dr. Joseph Schnetter, of New York, who, in answer to a letter of inquiry, was kind enough to write the following description of his operation :

“The cyst had no pedicle and was attached with a very thick mass of fibrous tissue to the right side of the uterus. This attachment being very vascular, it was necessary to ligature in several portions the parts representing the pedicle and to sew them into the incision of the abdominal integuments for the purpose of being able to control the secondary hemorrhage, if any should occur, which in fact soon took place several days after the operation. Mrs. — after recovery menstruated regularly through the cicatrix, and had an attack in New York, similar to the one for which you are attending her at present. My opinion is that a piece of the lining membrane of the cyst may still be left in the cicatrix, causing an accumulation from time to time and opening the cicatrix.”

“I should have mentioned that after the opening of the abdomen the large omentum was found rolled up, forming a large tumor, including an abscess containing almost a pint of purulent matter. This was probably the sequence of two or three tapplings of the cyst preceding laparotomy.”

On the 25th of last November, Dr. G. was called to see her, by Dr. Thomas C. Potter, of Germantown. She was hectic, much emaciated and bed-ridden, and was daily losing strength from a free discharge of pus, which escaped through a fistulous

thing has likewise been done by Dr. Porterfield in the *Medical Essays of Edinburgh*, Vol. 4, where this learned and judicious gentleman by a very well contrived experiment has plainly demonstrated the truth of the common opinion, that the eye has a power of altering its conformation so as to see distinctly at different distances.

I had myself, at leisure times for several years past, made a great number of trials, in looking through two and sometimes more pin-holes, sometimes through two narrow flints made near to each other in a card, sometimes by a pin held directly before the eye, which answers the same purpose as the narrow interval between the pin-holes, or between the flints in a card. And the objects I looked at were sometimes round, as a pin-hole in a card set against a candle; sometimes long, as a narrow flint in a card set against a wainscot strongly illuminated by a candle hid from the eye, or a strong black line upon white paper set against a window. And by those trials I found that the nearest distance at which with one eye I could see any of these objects single through the two pin-holes, or through the two flints, or on each side of the pin, was forty inches; but that I could sometimes see them distinct at much greater distances, as fifty, sixty, &c., to ninety inches and more. But as my eyes are now considerably decayed with regard to their power of seeing distinctly at small distances, and as Dr. Porterfield's experiments seem to be better contrived, and were more methodically made than mine, I fully acquiesce in the proof he has given, that the eye has a power of altering its conformation so as to see objects perfectly distinct at different distances.

II.

106. We pass, therefore, to the second point, to enquire within what limits these different distances are comprehended, or what is the least and the greatest distance at which *Perfect Vision* can be obtained.

(TO BE CONTINUED.)

opening in the abdominal cicatrix. This he probed, but the instrument ran upwards and inwards, more in the direction of the kidney than in that of the pelvis. So much blood followed the use of the probe that its use was not pushed very far. Under the cicatrix lay a tumor of some kind, which in front was hard and unyielding, but by bimanual palpation it gave the sense of a very large pelvic abscess. Into this tumor the probe did not enter. The womb was fixed, the fundus being pushed over to the right. The fistula had opened early in 1885, and has lasted ever since. In December, 1886, she had a very severe attack of peritonitis which kept her two months in bed and it was after the attack that the tumor first appeared. The hardness of that part of the tumor which lay under the cicatrix and the sense of fluctuation by vaginal palpation so perplexed me that I wrote to Dr. Schnetter for further particulars, and his reply, which he courteously placed at my disposal, I just read to you. On December 1st I operated on her at my private hospital, and I must confess that no case ever puzzled me so much. The fistula was first enlarged so as to admit the finger. As this gave no satisfactory information, the incision was lengthened in the old cicatrix to about four inches. This revealed a solid colloid tumor about as large as a cocoanut. It was firmly adherent to the cicatrix and to the abdominal wall in front and to the left side. When the lateral adhesions were severed a very large amount of pus escaped from the wound and the hand now entered into a capacious cavity wholly shut off from the peritoneal cavity by walls of thick pyogenic membrane, which at the navel looked like a false diaphragm. Into this cavity the colloid tumor hung as if it were suspended. That is to say, while its upper and right lateral surfaces were firmly and closely adherent to the abdominal wall, its under or lower surface, free from adhesions, projected into the fluid of the abscess cavity. A short and slender pedicle running from

the lower end of the tumor was lost in the pelvic floor of pyogenic membrane. Where this pedicle ended it was impossible to discover, as not a pelvic organ could be felt through this thick membrane, but it was closely adherent to the lower abdominal wall, from which it was detached before being tied and cut. The tumor was now cut open and its size lessened by digging out its contents with the finger nail. When it was removed, free hemorrhage occurred from the broken adhesions. This was checked by Monsel's solution and by the free application of vinegar, a pint of the latter being poured into the cavity and splashed about the bleeding surfaces. This large cavity was then treated by the capillary drainage of Mikalicz, viz., by packing with iodoform gauze. Since the operation the patient has done unexceptionally well, the temperature being always natural and the pulse not more frequent than it would be in a person so reduced as she is.

In reviewing this curious case it seems to me that the original tumor, removed by Dr. S., was an intraligamentary cyst of the right ovary; that as he suspected a small piece of the cyst wall was left in that portion of the broad ligament which was made the pedicle and sewed into the abdominal incision; and that *pari passu* with the growth of this fragment of the cyst, an abscess had formed between it and its capsule of broad ligament which formed the walls of the abscess. The four inch incision into the abdominal wall did not open into the peritoneal cavity but merely into a vast pus sac. The tumor was therefore a recurrent intraligamentary cyst and wholly extra-peritoneal. The wonder to me is that this lady bore for so long a time so large an abscess without losing her life.

Dr. Goodell also showed an ovarian cyst which he had removed a few hours before and in which the characteristic green hue of necrosis was marked. Torsion of the pedicle occurred one month ago, characterized by severe abdominal pains and excessive

vomiting. After this the woman gradually failed in health and lost flesh from chronic blood poisoning. A few hours before the operation another attack of pain and vomiting took place. The cyst was universally adherent to the abdominal wall, intestines and omentum. The pedicle, a very slender and short one, was so twisted as to stop all circulation, the cyst being nourished merely by its adhesions.

Dr. Wm. Goodell showed a specimen of what he deemed to be an extra-uterine foetation. A healthy lady, aged thirty-three, had been married thirteen years without conceiving. Her catamenia had always been regular up to two months before he saw her, when they were delayed for over two weeks. A few days before they reappeared she was seized with a violent pain "like cramps" in the pelvis "shooting upwards like knives." This was followed by syncope. Hypodermics of morphia were resorted to and she was left with a pelvic soreness that kept her in bed for several days. During the flow of this delayed period a second attack of pain occurred, analogous to the first, but not quite so severe. In about a week another hemorrhage came on. A few days later she had a third attack of pain and of syncope which took place at night. A third hemorrhage now occurred, which was followed three days later by a severe pelvic colic. This seized her as she was in the act of getting out of bed. The last attack took place on November 18, and she was left for several days very weak and nervous. On the 25th she consulted Dr. G. about the pelvic colics, irregular hemorrhages, painful defecation and occasional pains running down the left leg. He found a small womb pushed forward and to the right by a boggy tumor, lying to the left in Douglass' pouch. The diagnosis of extra-uterine foetation was made, its dangers explained and an early operation insisted upon. Both the lady and her husband were so shocked at this discovery and seemed to be so incredulous that he

(Dr. G.) deemed it best for them to get the opinion of another physician. He sent them to Dr. Joseph Price who confirmed the diagnosis. Very early in the morning of November 29, while she was in his private hospital, a fifth attack of pain of a "bursting feeling" aroused her out of a sleep. This was followed by faintness. At nine o'clock, about six hours after this attack, laparotomy was performed. As soon as the cavity of the abdomen was opened a large amount of black blood, of the consistency of thin molasses, welled out of the incision. Several knuckles of intestine were also forced out, which could not be wholly kept back during the operation. The right ovary was sound, but the left could not be discovered. In its place was found an irregular cavity, within which was found a tumor about the size of an egg, containing within its sac layers of coagulated blood. It was attached to the broad ligament, which was tied and cut off. A very large number of old clots and shreds of fibrin were flushed out of the abdominal cavity by means of a syringe, six quarts of water being used for this purpose. A drainage tube was put in and the wound dressed with iodoform gauze. So much hemorrhage occurred later through the tube that he spent several hours by the side of his patient, fearing it would be needful to reopen the wound. But by dint of keeping the blood from collecting in the tube, the bleeding points were kept dry and the hemorrhage ceased spontaneously. The tube was removed on December 3, and the patient has thus far had an uninterrupted convalescence. Dr. G. had not been able to examine the specimens carefully, but Dr. Baldy, who was present at the operation, had cut it open and he would like him to describe it.

Dr. Baldy said that the history of the case had been rather typical of extra-uterine pregnancy and the escape of dark colored blood from the abdominal incision at the operation seemed to confirm this opin-

ion. The mass which had been shown was brought to the surface and cut away, after being tied. This was apparently all there was to come away, there being nothing left but a sac filled with old blood clots, which sac was formed by adherent intestines and uterus and pelvic walls. The mass itself contained a semi-fluctuant tumor the size of a small egg and which he felt confident contained the foetus before it was opened. On being laid open it appeared like a large blood clot, parts of which had undergone degeneration, presenting a mottled appearance. A small portion of normal tube seemed to run directly into this mass, and as it reached it spread its coats out over the mass. The ovary was nowhere to be found. He believed that the mass was blood clot, but could not explain its occurrence. The foetus was not found.

On motion of Dr. Baer, the specimen was referred to the Committee on Morbid Growths.

Dr. Joseph Price read a paper on Tubal Disease a Primary Cause of Intestinal Obstruction.

In reporting cases I have repeatedly called attention to the frequency of adhesions occurring between the uterine appendages and some part of the intestines, and my purpose in this brief note is to emphasize the importance of recognizing the danger of obstruction of the intestine, arising from inflammatory conditions of the pelvic viscera. In glancing over the cases I have operated on during the past year, I find that in more than fifteen per cent. there were noted "dense firm adhesions" between the intestines and uterus and appendages, malignant cases not included. In every case, with one single exception, as far as I could determine from the history, symptoms and operative developments, the inflammatory conditions causing the adhesions originated in the uterine appendages. I do not intend to discuss the pathology of inflammation in the pelvis, nor to present statistic evidence, nor to cite numerous

authors who have recognized these lesions, as Greig Smith and others, for the few general observations I desire to make. And first as to the form or kind of obstruction likely to occur. The inflamed serous surface of the diseased tube or ovary, coming in contact with a loop of intestine, or an edge of omentum, provokes inflammation there and with characteristic promptitude these surfaces cohere. If the process is not severe and of slight duration, these adhesions may disappear as promptly as they occurred, by the enormous absorptive power of the peritoneum and hastened by the mild influence of the peristalsis of the bowel. If, however, the inflammation is severe or assumes a chronic condition, these adhesions gain in extent and strength and give rise to all the variety of conditions classed by Treves as "strangulations by bands." In most cases where these adhesions occur there is a history of constipation. It is probably due as much to the pain caused by defecation as to interference by the condition. Again the pain is often so great as to mislead the physician into thinking that a more virulent inflammation exists than really does. But the pain is not always proportionate to the amount of mischief. I have seen cases in which a mere omental adhesion has caused most agonizing pain. For instance, I recently saw a case in consultation, a woman who had had the appendages removed for backache, some time before, and who suffered excruciating pain, especially on defecation. In this case the only lesion found was the omentum firmly adherent to the original incision. The omentum here was much elongated and the transverse colon was dragged below the level of the umbilicus. In like manner I have seen the omentum adherent over the entire pelvis, dragging the transverse colon so out of place that a twist or kink of the bowel could be very easily found. It is not at all rare to find the vermiform appendix glued fast to the uterine appendages, while almost any loop of the small intestine may

become adherent to the inflamed pelvic viscera. As I have said, these adhesions vary in extent and density from those that will tear like wet tissue paper to those so well organized that it requires the scissors to release them, and it is not rare in pus cases for the bowel to be almost gangrenous about these points of adhesion, and in fact to tear through. That adhesions do not cause complete occlusion at the time of their formation, oftener than they appear to is no reason for regarding them lightly, for Mr. Treves tells us in the series of cases he studied that the average duration of the interval between the causation and the obstruction was three years, the shortest period being five weeks and the longest twenty-one years. In view of these general considerations it is hardly necessary to insist upon the release of the intestine wherever and to whatsoever extent adhesions exist. For if the surgeon leaves adhesions when he closes the abdomen, he leaves a probable cause of future serious trouble. Louis reports a case in which an ovarian cyst, when emptied by the trocar, so dragged upon an adherent bowel that intestinal obstruction developed. I am prone to believe that some of the deaths from intestinal obstruction after operation are due to leaving old bowel adhesions undisturbed.

Dr. Wm. Goodell said that his experience in ovariectomy led him to say that it is a mistake to postpone the openings of the bowels to a late period. He used to follow the old plan of not giving a cathartic until the eighth day, but he was confident that he had had death result from this practice in consequence of the formation of intestinal kinks from adhesions, making it impossible for the bowels to be moved. He now almost always gave an aperient or an enema on the fourth day, and earlier if any symptoms such as vomiting and tympanites present themselves.

Dr. B. F. Baer said that up to a few years ago he had also followed the plan of keeping the bowels confined after laparot-

omy, but now he had them moved on the second or third day—rarely as late as the fourth day. That good plan of quenching the thirst by allowing a pint of warm water to flow into the rectum, facilitates the passage of flatus and feces. He thinks it a mistake to give opium, as was formerly done. Intestinal obstruction was likely to result as well as adhesions. But this question must be settled by the requirements of each case. He had a case four years ago in which very serious collapse occurred at the end of the second day. Stercoraceous vomiting occurred and large quantities of flatus was passed by the mouth, but none by the anus. These symptoms were thought to be due to obstruction and reopening was considered, but not done. The patient recovered, although she did not pass flatus for five days. Should such a case occur again, he would open the wound, and would have the endorsement of most operators for so doing. Large doses of saline are advised in such cases, but he wondered if there was not some danger of rupture of the bowel in these cases of adhesion after serious operations, and he related the following case:

An ovarian cyst was closely adherent to the large intestine for a considerable distance. On the evening of the third day, symptoms of a septic peritonitis developed. A large dose of epsom salts was given. The next morning the general condition was better, but he found that liquid feces was flowing from the wound. He opened the wound and tried to find the point of rupture and close it with sutures. Even after having enlarged the original opening, the ruptured point could not be found on account of its depth in the pelvis and the amount of lymph thrown out. He then closed the wound without drainage, but freshened the surface of the drainage tube tract and closed it, hoping that the freshened edges would unite. In two days fecal matter again appeared, symptoms of collapse developed and she was expected to die. She, however, finally recovered. The fistula has en-

tirely closed. The lesson he learned from the case was, that when rupture of the bowel occurred under similar circumstances the best plan is to let it alone. Dr. Price had referred to two cases where he reopened the abdomen for pain and found the omentum adherent to the line of incision. It is unfortunate that we do not know of some means to prevent these adhesions, but it is a wonder that they do not more frequently occur in the line of the incision and to the raw surfaces left after separating adhesions. He knew of no better way to prevent this accident than by the early use of laxatives. Probably much of the pain complained of after operation is due to adhesions, and it is unfortunate that we should be called upon to reopen the abdomen in order to release them. Would it not be wise to give nature time to adjust matters, since there is danger of the formation of other adhesions from the second operation?

Dr. Wm. L. Taylor read a paper on "Fixed Uteri."

In looking over my case book I find the remark, "uterus fixed" so often noted, so often helplessly, but I trust not hopelessly, underscored as much as to say, "here again," that I fain would ask, how many of these cases were in their inception recognized as cases of peritoneal inflammation? In a number the note is made, "patient had attack of inflammation of bladder." "Inflammation of the bowels" has been of alarming frequency, whilst "congestions of the liver" makes me wonder at the special degree of sensibility of that organ in women. In one case in which there was eventually a fatal relighting of a former peritonitis, the original trouble was noted as an attack of "wind colic of the bladder." If these attacks of peritonitis with their resultant lymph deposits are so grossly misnamed, is it not more than likely that the abortion, or at least the curative treatment is as far afield? In a series of cases where the lymph deposit seemed to be the most diffused, a positive history of an active and

acute inflammatory trouble could not be obtained. There was only the history of a continued abdominal pain and tenderness, dating from an abortion, from heavy lifting, seldom from normal labors, and presumably never from gonorrhœal infection. Seldom, I might say never, have I had perfect success in my efforts to trace the cause to this infection. The history of the husbands as to the existence of a gonorrhœa or gleet at the time of commencement of pelvic trouble, is, in the vast majority of cases, worse than uncertain. In several of the subacute cases the only ascribable cause appeared to be indirectly, if not directly, the effort to prevent conception. Freedom from the possibility of at least paternal cares, leads to an amiable weakness and coition follows coition in quicker succession than the law of conservatism would recognize, and plus the menstrual congestions, which now even anticipate, without the restful periods of pregnancy and lactation, congestion and inflammation of the peri-uterine tissues follow. That this is as immediately the cause of the fixed uteri, the thickened and enlarged ligaments and tubes and tender ovaries as is gonorrhœal infection, even in prostitutes, I am inclined to believe. Where the deposits of lymph were more localized or larger in quantity, seeming as if it had been poured out quickly and had by gravity centered itself around the uterus, there were the histories of acute, well marked attacks of cellulitis or peritonitis. The causes were difficult labors with badly lacerated cervixes, these lacerations extending through into the cellular tissue, and also criminal abortions. In these cases, how often traumatism and how often septic poisoning was the exciting cause, it is impossible to say. Catching cold while menstruating, falls and various other accidental causes were among the number.

The average physician, as soon as the patient is up out of bed, shakes himself by the hand and says, "I have cured my patient." But he hasn't! There is still the important

sequel to deal with—the lymph deposit. In fully three-fourths of all the cases the body of the uterus has become fixed in retroflexion even in multipara. Just as soon as the uterus feels the stimulus of congestion or inflammation of surrounding tissue, it becomes turgid and heavy and sinks decidedly lower in the pelvis until the cervix is near the vulvar orifice, and following the curve of carus, the fundus is retro-displaced. Here it is as it were, frozen in, fixed immovably. All around it is a mass of inflammatory lymph becoming more dense and resisting as organization advances. In the center of this the sound probably indicates the uterine body with a measurement of three and a half inches. The cavity is tender and the cervix softened, congested with venous blood. Now, this deposit varies greatly in quantity as the inflammation has been by judicious treatment or by nature alone, limited or been allowed to involve a great extent of peritoneal surface. The possibility of determining the amount of lymph deposit and the degree of fixation by bi-manual examination, seems to me to be one of the few certainties in gynæcological practice. A uterus which is low in the pelvis and which cannot be raised to the normal line, and a fundus which is retro-flexed and can not be repositied, with the other evidences bi-manually, of thickening and deposit, can not but point to the certainty of previous inflammation. A sterile uterus and a fixed uterus seem to be almost synonymous. The ovaries and fallopian tubes have become merely painful spots and useless for the purpose of conception, and should the patient conceive, the uterus seems unable to enlarge and expels the foetus for want of growing room. When I find a young married woman with evidences of a former peritonitic inflammation, I am very guarded in my promises for her future fertility. Backache, ovarian pains and headache, metrorrhagia or menorrhagia, profuse leucorrhœa, bladder and bowel irritation and a thousand and one nervous phenomena

mark a very unenviable period in the patient's life. Hysterical, fretty and worrisome, she is a burden. The ovaries have prolapsed with the uterus and are embedded in and virtually strangulated by surrounding lymph. Menstruation, which before was painless, now gives place to severe dysmenorrhœa. The pain is different and more wearing than that due to simple stenosis. It begins several days before the menstrual flow as a more or less steady, throbbing, sickening pelvic pain, extending down the inside of the thighs. As soon as the flow is established, this pain gradually gives way to the never-ending backache and pelvic dragging. Sometimes there is premenstrual nausea and vomiting, due undoubtedly to ovarian pressure.

In nearly all the cases there is a fungoid endometritis as a result of the continued uterine congestion, hence the metrorrhagia or menorrhagia, notwithstanding which the uterus seems to become more congested and more tender.

The need of shortening these attacks of pelvic peritonitis, aborting them if possible, can only be appreciated by those called upon frequently to treat the segullæ. In traumatic cases where there is no reason to suspect septic influence, as soon as the usual symptoms of peritoneal trouble present themselves, the lower bowel is thoroughly moved by an enema of sweet oil and turpentine; the patient's hips are then decidedly elevated by pillows or by elevating the foot of the bed so as to as much as possible drain off the pelvis, and also to keep the pelvic organs from prolapsing. From twenty to thirty grains of chloral by the bowel and from one-eighth to one-fourth grain of morphia, hypodermically, are given. A thin flannel binder is applied loosely and on that over the abdomen an ice bag is placed and kept there, not one hour, but for hours. A febrifuge is given with the ice cap and antifebrine if the temperature reaches 102°. Where there is evidence of septicæmia with the clammy skin, the sunken eyes, the cen-

tral heat, I have the bowels thoroughly evacuated by divided doses of calomel and soda and administer quinia, in ten grain doses, every four hours until my patient complains of tinnitus. To the abdomen I apply a large turpentine stupe followed by a light poultice. The hips are elevated, and if there is positive need for an opiate a vaginal suppository of ext. opii. ag. grs. jii; ext. belladon. grs. j3 is used. If these attacks are thoroughly treated the amount of lymph thrown out is small and probably will be absorbed almost as rapidly as it was thrown out. But we meet a case which was treated by "the other doctor around the corner," and the uterus and its appendages are, as before described, imbedded and immovable. Now what are we to do? The great object is to get rid of as much of this effused matter as we possibly can. The older and more thoroughly organized this becomes, the less chance there is of rapid and complete absorption. So the moral is, commence early! It is going to do one of three things: undergo abortion, break down and form pelvic abscess, or become organized, acquiring an adventitious circulation. When I meet a case of recent or comparatively recent deposit, where I can have my directions enforced I am confident of success. I commence treatment by correcting the digestive tract, getting the stomach, liver and bowels in better condition, and surface circulation is stimulated by warm baths and frictions. I then give the corrosive chloride with the iodide, commencing with small doses frequently repeated and gradually increasing the dose and lengthening the time. In the use of bichloride and iodide I have had marked success, much greater than in those cases treated with iron and bitter tonics, the same local treatment being used in both. Locally, I rely on the abdomino-vaginal galvanic current and gentle or more decided uterine massage, as there is great or little tenderness. This uterine massage I prefer in cases of long standing where the tenderness has disappeared; but still used

carefully where there is tenderness, I find it beneficial. Every other day or twice a week I make steady pressure upon the fundus of the uterus with the index finger of my left hand in the rectum and upon the cervix and body of the uterus with the right index finger in the vagina. This pressure I keep up for two or three minutes, gradually trying to force the body upwards and forwards. Then efforts at lateral movement for the same length of time. This massage I follow with the continued galvanic current, using the abdomino-vaginal method. For the breaking down of pelvic lymph I have not used electro-puncture, preferring the slower and as certain absorption by the stimulation of pelvic circulation. Where there is tenderness I use the positive pole in the vagina and the negative over the abdomen for the first three or four applications and it is marvelous how speedily this tenderness disappears. I then reverse the poles using the negative with a ball or small crescent-shaped electrode in the vagina. These seances, including the massage, lasts for about fifteen or twenty minutes. The strength of current averages about twenty-five to thirty milliamperes. After this is over I frequently pack the fornix with wool, introducing a small ring pessary to keep the wool as much as possible in position. After I gain a certain amount of mobility I introduce a Smith-Hodge pessary, small at first, increasing to a more suitable size as the uterus rises to the normal line. Tincture of iodine to the fundus of the vaginae, flying blisters and the hot water douche I have tried faithfully with uncertain success, but not so often since I have found such positive relief from galvanism. In the cases of much longer standing I acknowledge that all I can get from galvanism sometimes is the relief from pelvic pain. Can we get anything more from other treatment? Out of a series of twenty cases in which galvanism and massage were employed for the purpose of relieving pelvic soreness or pain and inducing mobility of the uterus, twelve

cases were discharged after an average of twenty applications each, sufficiently improved to need no after-treatment; four are improving under treatment and four disappeared after one to five applications. In over one-half of these total cases prior treatment had been faithfully tried before galvanism was resorted to.

Dr. T. Hewson Bradford read Notes of Gynæcological Cases Treated by Electricity.

Recently so much matter has been brought before the profession regarding the use of electricity in gynæcology, that I wish to present to the society some notes respecting the practical application of the battery upon patients, in my work at the Gynæcological Out-patient Department at the Pennsylvania Hospital. The number of patients so far is small, but covers a large field in diseases of women. In each case I have marked the results of the use of the battery and the extent of the time applied. In the beginning the treatment was with the acid portable battery of thirty cells used in the hospital work, but later the Board of Managers kindly provided a seventy-cell Law battery with controller and milliamperemeter. The abdominal dispersing pole is the clay electrode of Apostoli, and the intra uterine electrode is the platinum sound insulated with shellac, as devised by Dr. G. Betton Massey. The efficacy of the work is largely due to the services of Dr. Massey and Dr. Robt. H. Hamill, both of whom are associated with me in the department.

Case 1. Stenosis of cervix; aet. thirty years; no children; no miscarriages; menses irregular, scant and with some pain; os pin-hole in appearance. July 14, Simpson's sound introduced with great difficulty and positive cauterization of eighty milliamperes applied for four minutes. Treatment continued at stated intervals until September 15, with a total of six applications. She menstruated September 22, normal in duration, less painful, and again on October 26, when flow was very free and pain very

slight. She considers herself entirely well, the last visit being Nov. 13.

Case 2. Antiflexion; aet. twenty-one years; single; one week before she came to us she lifted a heavy weight and at once felt a severe pain in the back accompanied by a feeling of nausea; uterus sharply antiflexed; cavity two and a half inches; first visit, October 30, sound introduced and fundus brought to normal position; November 6, positive cauterization eighty milliamperes, two minutes; patient returned November 8, 13, 20, 22, 24 and 27, and treatment continued with varying strengths and length of application. On the two last named dates sound showed uterus in normal position.

Case 3. Metrorrhagia; aet. twenty-two years; no children; one abortion five months before; menstruation occurred every three weeks, lately lasting four days; excessive in amount, with severe pain; uterus small and in normal position; os small; sound enters two and a half inches; first visit September 18, applied positive cauterization, forty milliamperes, four minutes. She returned at stated intervals until November 1, and treatment continued. Menstruation October 1, normal and but slight pain. Patient returned later expressing herself well.

Case 4. Metrorrhagia; aet. forty-five years; no children; no miscarriage; ill health has lasted for six years; menstruation irregular, excessive and very painful; locomotion painful and difficult; uterus enlarged; os patulous; cavity three inches; ordinary treatment pursued from April 17 to June 7; there then being no improvement, negative cauterization of twenty-five milliamperes was given for seven minutes. The following day she felt severe uterine pains, but after these had left her she felt better that she had for months. The bleeding continuing up to July 7, it was decided to change to the positive cauterization. From this date until October 20, a total of nine applications were made, varying in strength from seventy to two hundred milliamperes

and lasting from one to three minutes; August 24, menstruation appeared and lasted six days, very profuse; November 1, it again appeared normal in all respects. A review of this case is convincing that the results might have been obtained by less severe treatment than was used on several occasions.

Case 5. Obstructive Dysmenorrhœa; aet. thirty-two years; one child, three years ago; no miscarriages; ill health since last pregnancy; a constant pain in sacral region; menstruation irregular and painful; slight at first, but afterwards excessive and clotted; September 18, uterus large but movable—cervix, stellate laceration; cavity three inches and positive cauterization, seventy milliamperes, four minutes; pain followed and lasted until September 20, when it ceased on the appearance of flow. Treatment continued at stated intervals until Nov. 24, when menstruation appeared, lasting four days with only slight pain on first day; flow full and normal; only slight appearance of clots. Patient appears entirely well.

Case 6. Hyperplasia with Dysmenorrhœa and Retroflexion; aet. twenty-nine years; single; ill for three years and has had severe pain in back; cervix had been removed, but symptoms only aggravated; menstruation regular, free and painful; uterus presents a broad truncated surface and is retroflexed; cavity two and a half inches plus but broad; negative cauterization; forty milliamperes, five minutes; November 10, positive cauterization substituted for negative; sixty milliamperes, four minutes; November 15, faradic current to vagina; retroflexion corrected; faradic intra-uterine, two minutes; December 4, menstruation, first two days scant, last three days full and free; less pain than for any time for three and a half years; still under treatment; faradic current used to stimulate relaxed vaginal walls.

Case 7. Subinvolution; aet. thirty-seven; eight children; two miscarriages; ill since last pregnancy, eighteen months ago;

ten days before coming for treatment had aborted a two months foetus; October 4, uterus subinvolved; os pastulous; cavity three inches plus; treated with tampons of glycerine, hot water injections and tonic pills until October 9, when negative cauterization, 125 milliamperes, three minutes, was applied, producing slight pain; bleeding continuing, strong faradic intra-uterine currents was used on 18th and 20th and flow controlled completely; October 25, discharged cured; November 13, still well.

Case 8. Prolapse of Left Ovary with Adhesions; aet. twenty-six years; three children, one miscarriage; last pregnancy four years ago, when pain has become progressively worse; dyspareunia intense; menstruation regular, but painful; painful sanguinous discharge for four weeks; uterus enlarged and displaced to the right; right side very painful; both tubes enlarged; on the left a mass is felt, apparently a prolapsed ovary, surrounded by exudation. September 22, bromide and ergot; September 27, drugs stopped, positive cauterization, forty milliamperes, three minutes; October 4, negative cauterization; treatment continued to November 13, when uterus measured two and a half inches; mass to left scarcely discernable; has had pains at times after applications; November 20, faradic intra-uterine application, three minutes. The notes of the treatment of this desperate case for which abdominal section had been advised by several physicians, shows the care that must be exercised in electrical treatment and the small currents that are at times best. The case is still under treatment.

Case 9.—Submucous myoma and suppression of menstruation; aet. thirty-eight, seven children, three miscarriages; five years since last pregnancy. Duration of illness, two years. Menstruation irregular, scanty and painful. Leucorrhœa; locomotion at times painful; cystocele and rectocele; uterus hypertrophied, os patulous, cervix congested; vagina much inflamed. Sound

enters four inches and encounters a projection the size of a shell-bark on the posterior wall. First visit August 9th. Negative cauterization; 50 milliamperes, four minutes after which she had severe pain. August 16.—Severe pain in left ovarian region and uterus tender. August 28.—Menses with severe bearing down feeling, lasted four days. September 1.—Much pain in left side; treatment continued, varying from positive to negative cauterization and in strength and duration. September 20.—Tumor still there; negative cauterization; 150 milliamperes; uterus measures three and one-half inches. October 30.—Menstruation on date, lasting six days; cavity, two and one half inches, plus; projection reduced to a slight roughness. Still under treatment. Pain after applications due to a six-mile street-car ride after each treatment.

Case 10.—Intra-mural fibroid; aet. twenty-four; one child; no miscarriage; last pregnancy eleven years ago. Menstruation regular, scant and painful. Leucorrhœa profuse; fibroid uterus as large as an orange; cavity, three inches. September 22.—Negative cauterization; 50 milliamperes, four minutes. The same treatment was continued up to November 13, the strength of the current being increased to 150 milliamperes. Several positive cauterizations were given. Now the tenderness and purulent discharge is corrected and the tumor is reduced to two-thirds its size. Still under treatment.

Case 11.—Large intra-mural and sub peritoneal fibroid; aet. thirty-eight years. Tumor first noted two years ago. A large irregular fibroid occupies the lower two-thirds of the abdomen. Os patulous and difficult to reach. Cervix lacerated; menstruation regular, profuse and painful; locomotion difficult, and feet and legs swollen. Nodules of tumor painful. August 14.—Negative cauterization, sixty-five milliamperes, 4 minutes, which caused for some days pain and continuous sanguinous discharge. August

16.—Positive cauterization, 125 milliamperes, four minutes. Treatment with negative and positive cauterization, varying up to 150 milliamperes, continued until October 18, when tumor was an inch or more below umbilicus, and she could wear clothes four inches less in waist circumference. Deep sulci between nodules. December 4.—Since last visit has been feeling badly; sickness appeared November 28 and lasted four days, profuse and painful. Every night since last visit she has had a thick discharge, accompanied with pains similar to those of labor. Kneeling produces large discharge of white, stringy substance; tumor has considerably diminished. It is probable that the shreds noticed by me are portions of the tumor. Still under treatment.

Dr. G. Betton Massey said he had a special interest in watching these cases and experimenting to determine the justice of claims that have been made by Apostoli and others. At Dr. Bradford's request, I performed the electrical operations for him at his clinic. I think that we had good results in several cases, and if the cases had been summarized more briefly, this would doubtless have appeared more sharply in the case of stenosis of long duration. The application of a few positive cauterizations at considerable intervals seemed to result in a complete cure. The treatment extended over several months, but the applications were generally made at intervals of one or two weeks. But it is sometimes difficult to determine how frequently the applications should be repeated. My observation of these cases and of others in private practice has been that it is not wise to make applications of more than fifty milliamperes oftener than twice a week.

The second case, one of marked anti-flexion in the third degree, in a young girl, and probably the result of strain, is rather unique. She seems to have been cured by two or three positive cauterizations of fifty to eighty milliamperes, lasting over a period of a few weeks. Several months have

elapsed since the cessation of the treatment and the uterus still maintains its normal curve. The idea was, if we had a flexion of the uterus due to muscular relaxation on one side, the galvanic current would throw it into a spasm and keep it there and at the same time cauterize the M. W., and make the canal more patulous. I believe that the approved electrical treatment of flexion at the present time is by the bipolar faradic current to throw the uterus into contraction. I have however, had no experience with this method. It is difficult to get a bipolar electrode that can be thoroughly cleaned.

The third case was one of acute metrorrhagia with an excellent result. Case seven was also one of metrorrhagia. The lesson of these two cases, as has been stated in the paper, is that galvanic treatment of a surgical nature (over thirty or forty milliamperes) is rather harmful in the recently parturient womb. In the seventh case I think there was decided aggravation of the difficulty as the result of three cauterizations. The effect of the faradic current, monopolar, was very marked in arresting at least two-thirds of the hemorrhage. The second application was followed by complete arrest.

Case four deserves particular attention—it was one of protracted metrorrhagia in an elderly woman, with hyperplasia of the womb, and evidently some endometritis. As was stated in the paper, this case was over-treated. I can recognize a stage in her case in July or August and in September, when she was practically cured as the result of the application of a moderate current. In these months the cauterizations made her worse for a week. She is now entirely well.

Case eight was much like one delineated by Dr. Taylor. There was a mass of induration in which most likely an ovary was included. The patient has apparently been benefitted. It was particularly apparent in her case that nothing but very moderate currents, twenty to thirty milliamperes, were immediately beneficial. Whether or

not heavier currents would have been beneficial is a question. Even the introduction of the electrode was followed by pain and cramp. Low currents even, at times, aggravated the pain temporarily. There has finally been vast improvement. The fibroid cases have been well delineated in the paper. These cases showed a great lessening in the size of the tumor and an amelioration of the symptoms accompanying them.

Dr. B. C. Hirst thought it was a gratifying fact that we were advancing in this branch of therapeutics. It seemed that for a time we did lag behind other gynecological centres. He had seen some of Dr. Massey's work. At Dr. Hirst's request, he had applied the current at the Philadelphia Hospital on a patient with retarded involution, due to multiple fibroma, with good results. He tried electricity some time ago, but with very little result, because he had, he thought, used too weak a current and because he did not thoroughly understand the application of electricity in gynecology. He thought that much of the criticism of this kind of treatment had been ill-considered. He had just read Mr. Tait's criticism in the *British Medical Journal*. Mr. Tait went to Paris to learn Apostoli's method, but when he got there he refused to visit Apostoli. He said that on inquiry he did not hear sufficiently favorable reports to make it worth his while to go and see the method applied. This reminded him of the English gentleman who went to the West Indies to see the Pitch lake, and on his arrival sent his steward to look at it for him. Dr. H. thought that in the future, electricity must occupy a very prominent place in gynecological treatment. With the excellent appliances that our prominent electricians possess and the skill they have acquired by recent practice, we should accomplish as much in this direction here as has been done in other places.

Dr. J. M. Baldy said that he had never used electricity in his gynecological practice for the simple reason that he had not

felt competent to get the best results, not being an electrician, nor had his observation of the work of others made him desirous of doing so. He had, however, done still better—he had put himself in the way of observing the work of experts in this branch of practice. He thought that Mr. Tait's time had been well spent in not going to see Apostoli—better than his own. Mr. Tait said that on inquiry amongst the patients of Apostoli, he found that there had been so little benefit that he did not consider it worth while to go to merely see the details of the application. He had hunted up the patients and studied them. What Dr. Baldy saw at Apostoli's clinic was entirely negative. The most conservative review of electricity in gynæcological practice that he had seen recently, was that of Croom, of Edinburgh. Croom took the precaution of having the application made by a gentleman specially skilled in electricity, Dr. Miloe Murry. He continued the treatment one year, applying it especially to fibroids. He states that his results have been entirely negative. He has seen greater risk to life from the use of these applications than from the knife in the removal of the uterine appendages. There are some details in the application which would strike one, as it did himself, not in the habit of using electricity, very forcibly. Apostoli denies that there is pain. Dr. B. did not see a patient treated by Apostoli that did not cry out and squirm with pain. The same thing was noted and remarked upon by an English surgeon, who was there at the same time with himself. He had also observed this at the Pennsylvania Hospital, even under comparatively low currents. After the puncture in fibroid tumors, as seen in Paris, there was left nasty, ugly-looking, sloughing sores, requiring constant care that they might not set up a bad septic trouble. Having seen none of these annoyances mentioned in reports, he was somewhat astonished.

He had followed with considerable inter-

est the observations made at the Pennsylvania Hospital, but what he had seen had not influenced him to think much better of the treatment. In a number of the cases the patients were made worse. One was a case of papillomatous cyst, afterwards operated on, in which, after talking the matter over, it was decided that there would be great risk in continuing the treatment, as the patient had become so much worse after each of two applications. Another case, the one of pelvic inflammatory trouble reported in the paper, had, he believed, not been improved up to the present time and, if anything, was rather worse. One of the gentlemen connected with the clinic, told him that he also believed that nothing but the knife would help her. The good results that Dr. B. did see were just such results as he was in the habit of getting by free purgation and other treatment. Patients with a pelvic mass will often, after free purgation, come back so much relieved that they will consider themselves cured and will refuse operation. This is exactly what he had seen from the use of electricity and nothing more. In regard to fibroid tumors, one of the cases reported had told him that before the applications of the current she had had no hemorrhage of any account and that she had not obtained benefit from the treatment, but that her bleeding had become much worse. Subsequently, he believed that she had progressed somewhat better. The diminution in the size of the tumor was so little that he could not determine it by the sight and touch. He was still open to conviction if he could find anything which would make him think that permanent good could be obtained, but that he wanted more than the mere report of cases—he wanted to see the cases and judge for himself.

Dr. T. M. Drysdale had not intended to take part in the discussion, but he could not permit what Dr. Baldy had said to go unchallenged. He had had some experience in this matter, having been working at it pretty steadily for the past three years, and

in Philadelphia at the time, but in three months she returned, when the tumor was found to be growing rapidly, while she was greatly reduced by repeated hemorrhages. In October, 1887, the use of electricity was commenced, and in April, 1888, she returned to Brooklyn and was examined by Prof. Skene, who found the tumor had entirely disappeared. He could give many other instances, but should reserve them for a future paper.

Dr. John B. Deaver would ask these gentlemen who have been using electricity in the treatment of plastic exudates, whether the rationale of the treatment is not the same as in the treatment of urethral stricture by electricity. In his hands this had proven utterly useless. Dr. Keys has written an elaborate paper in which he condemns it, concluding that it is without benefit.

Dr. Joseph Price thought it would be just as well if every one would give us their bad results as well as their good. Many have had sad disasters with this method of treatment. He had once seen presented to the New York Obstetrical Society several fibroids which had sloughed out from the cul-de-sac of Douglas. Dr. T. A. Emmet at the time remarked that the good Lord had saved the patients in spite of the treatment. Dr. Baldy has stated what he saw at Apostoli's clinic. When Dr. Massey stated that he had used it from an exploratory and experimental point of view, he nearly struck the key-note of the whole business. He had himself given it a fair trial, but had found it wanting. His experience differed from Dr. Taylor's as regards gonorrhœal infection. He had found in about every case a gonorrhœal history in the father. In one case a blind child had met him at the door, and he removed pus tubes from the mother. The father confessed to having had the disease twice. This case he could duplicate many times, minus the blind child. He valued the bichloride more for the saving of eyes than for the saving of women—it was

rare now that he ever had ophthalmia in children. Dr. Baldy had covered the point in regard to the bowel disturbance. In these cases of pelvic exudate, he called them pus tubes; a saline would often completely relieve them temporarily. A fungoid condition of the uterus is rare. He rarely has to use a curette. The danger of electricity has been dwelt upon by a great number of men throughout the country, and most who have tried it have given it up for some milder application.

Dr. H. A. Kelly said this is a matter of great importance. There is outside the domain of abscesses and big tubes and ovaries a class of cases which still trouble us, and for which the profession has looked with hope for relief from the proper application of electricity, which has not yet had a fair trial at the hands of gynæcologists. The great claims made by a few men at the outset have not yet been justified, and have been an injury to the whole subject. He had seen some good results and felt that in a limited number of cases we shall be successful. The caption, "Fixation of the Uterus," is a convenient one, for it is often the first thing that attracts our attention. There are three ways in which fixation of the uterus is produced. One is by eccentric growth; the enlargement of the uterus itself fixes it in the pelvis. He recently performed abdominal section to determine whether or not a uterus enlarged by cancer was fixed by deposits in the broad ligament or the pelvis. Finding nothing, he closed the wound and removed the uterus by the vagina. The second cause of fixation is the presence of diseased tubes and ovaries; remove these and the uterus is free. Outside of these conditions there are cases of dysmenorrhœa where we are apt to diagnose stenosis or endometritis, in which the mobility of the lower part of the uterus is limited. In these cases he has learned a point which he thinks is one of the most valuable he has yet learned in gynæcology. Digital examination reveals a tenderness on

the left side; on pressure there is no marked degree of resistance on the two sides, but we often note the left fornix obliterated or shallow. Determining exactly the nature of the trouble and proceeding upon a plan of treatment for their cure, he has been able to throw an entirely new light upon such cases. It is to catch hold of the anterior lip of the cervix, draw it down and then, passing the finger behind the uterus, we feel on one side the broad ligament, but on the other side we now feel what we could not feel before, a distinct hard line, either in the broad ligament, the utero-sacral ligament or both. He then employs massage to stretch this tissue. A patient recently came to him with a uterus thus fixed and the ovary bound down on the left side. By drawing the uterus down and pressing upon the adhesions they were thus gently torn apart and separated, and by the aid of this treatment the patient has been cured of all distress and the ovary is mobile. He had treated the case for months before by other methods without relief.

Dr. B. B. Baer said he was glad to hear and see the graphic description given by Dr. Kelly, as it supported the position which he had taken before the society at the last meeting. Many of these cases are benefited and practically cured by this treatment, used with other remedies. He finds large retroflexion and fixed uteri more difficult to manage than fixed tubes and ovaries. When it is determined that the tubes are incurably fixed or contain pus, they should be removed. He is a firm believer in the value of hot water as a stimulant to absorption of inflammatory exudate. He has used galvanism and believes that it is an excellent stimulant to absorption. From what he saw while he was in Europe, he procured a battery of the same pattern as that of Apostoli and had used it in many cases since his return. He had learned to look upon galvanism as an excellent stimulant when given in small doses in cases of exudation, but he questioned whether it was

better than hot water, iodine and massage. It is a powerful and dangerous remedy sometimes, when used in doses large enough to induce electrolysis, especially when puncture is used. Without puncture in large doses great pain is given, and unless the dose is large the process is slow and tedious. He who would hope to get good results from this treatment must use great patience. In a case of interstitial fibroid he had used the positive pole intrauterine. After the second application the hemorrhage ceased. He began the dose at eighty milliamperes and increased it to two hundred. The latter strength caused so much pain and tenesmus that after a month's treatment the capsule of the tumor beginning to break down and slough, he stopped it. He then tried to enucleate the tumor, but did not succeed, and the patient died from metritis. His mistake was want of patience in the use of electricity. In similar cases he was using lower strengths and giving more time. The patients are systematically improved, but the tumors do not rapidly decrease in size. He had removed by laparotomy a pedunculated fibroid, on which electricity had been faithfully tried by an expert for several months. He thought that the treatment had done more harm than good in this case, as it was subperitoneal and pedunculated. In a tumor of that character electricity had little or no power when applied without puncture, and to puncture in that case would have subjected the patient to greater danger than to remove it by laparotomy.

The President: I do not agree with that; you get electrolysis from the simple passage of the current, even if there is no puncture.

Dr. Baer replied that he did not know the meaning of electrolysis if it was not the destruction of organized tissue by resolving it into its elements, and to get this action a higher power than one would be warranted in using must be applied.

There is another class of fibroids in which the curette for the control of the hemor-

rhage is more rapid, safer and just as efficient, if not more so, as electricity, which he would illustrate with a case. The patient complained of great hemorrhage and pain. Examination revealed a hard nodular mass connected with the womb. The end of a finger could enter the os, and the cavity was four inches deep. The cervix was dilated and a large mass of fungoid growth was removed in five minutes. Iodine and carbolic acid were injected into the cavity. She is cured symptomatically and the tumors are smaller and more mobile.

Dr. Geo. E. Shoemaker thought there was no doubt that the claims made for electricity were exaggerated. However, electricity will contract the capillaries and lessen the size of any vascular tumor. Any one can prove this by applying, when he has a coryza, one pole on each side of the nose and passing a mild current. In a few moments the nose will be free. In the same manner it may temporarily lessen the size of the capillaries in these pelvic cases and so temporarily diminish congestion.

Dr. M. Price said that he had only found two forms of fixation of the uterus. One is non-inflammatory, the other bound down by inflammatory bands. It was absolutely useless to tell him that a uterus bound down by adhesions could be replaced. It would be as easy to believe that adherent fingers and toes, resulting from a burn or scald, could be relieved, as that electricity applied to the pelvis could release adhesions of the uterus when it is all that we can do at times to tear them loose with the finger. In regard to massage it is absolutely absurd to talk of any patient submitting, who has any decency, to a man fingering her vagina by the week. If there were inflammatory trouble, it would do mischief. He had a case where electricity had been used and where all sorts of applications have been made. He was positive that there was pus. The temperature was 103°.

Dr. Wm. Goodell could not allow the remarks which Dr. Price had just made to

go unchallenged. He believed that massage of the fixed womb could be employed with propriety and without the indecency alleged by Dr. Price. He had, with Dr. Taylor, treated a case in which a pelvic inflammation had been set up by treatment at the hands of an irregular practitioner. She almost died, but finally recovered, with the roof of the pelvis feeling like a hard board. The womb was enlarged and absolutely immovable; she had menorrhagia and constant pain. He began treatment by applications of a mixture of carbolic acid, iodine and chloral and by using uterine massage. In doing this one simply passes one or two fingers behind the womb and, catching it from above with the other hand, rocks it from side to side and backwards and forwards, stretching the adhesions and separating them if possible. Dr. Taylor administered electricity locally. To-day she is in rude health. The discussion in regard to electricity reminded him of the old story of two knights approaching an image from opposite directions. The one insisted that it was gold, and the other that it was silver. From words they came to blows and in their death struggle they looked up and saw that the image had two sides to it, the one gold, the other silver. He thought this subject also had two sides to it. He had closely watched the growth of electricity and had always felt that there were remedial virtues in the agent which would be developed. Yet, while he believed that we could get a great deal of good from it, he did not believe that it would cure pus tubes or suppurating ovaries; neither does he believe it will remove organized adhesions, although he felt sure that it would cause the absorption of recently deposited lymph which is not organized. He knew from unquestionable facts that in fibroid tumors in which hemorrhage is a prominent symptom, electricity is an admirable agent, but he was not ready to accept the statement that it will reduce the size of fibroid tumors, either permanently or without subjecting the pa-

tient to more risk than the operation of oöphorectomy. He knew of one of his friends who has had two deaths, another has had one, if not more, deaths. A third applied electricity to the womb of a lady in his office, and she died of inflammation a few days later. A fourth friend met with the same disaster, although he is an authority on electricity. On the other hand, he knew of the wife of a physician who had been treated in various ways without benefit for hemorrhage, coming from a fibroid tumor. The curette, however, had not been used. Three applications of electricity cured her. Her husband assured him that he had two or three other patients cured in the same way of hemorrhage. He thinks that in fibroid tumors, where a current of 150 to 200 milliamperes is applied, we shall be likely to obtain the result which occurred in a case lately reported in the *American Journal of Obstetrics*, viz.: an opening into the capsule of the tumor and the slow delivery of the latter by the vagina. If we decide to enucleate by vagina, it is far safer to incise the capsule and remove the fibroid at one sitting. Such treatment prevents necrosis and its attendant dangers. He thinks there is a great future before electricity, especially in those cases in which operative procedures should not be resorted to and in cases of recent pelvic exudates.

Dr. M. Price said that Dr. Goodell started out with a very pretty case indeed. The pelvic abscess was evacuated and all that was risking her life was removed. Unless there was multiple abscess the woman was safe after this discharge. Some years ago he had two cases of rupture of the abscess, one through the bowel, and the other through the vagina. Both of these women are as healthy as any in this city, and neither electricity nor massage was used on them.

Dr. J. M. Baldy did not mean to deny that electricity would relieve pain and hemorrhage in vascular tumors. Electricity is, however, a dangerous remedy used indis-

criminally and in large doses, where we do not know the exact condition of affairs. The diagnosis in all abdominal troubles is obscure, and most so in pelvic growths. He considered that in hemorrhage and pain we had safer remedies than electricity and could accomplish just as much with them with much less risk. He realized that in fibroid tumors electricity will diminish the size, but he thinks that a study of the cases shows that the effect is only temporary. The growth of the tumor could be stopped as well by other means as by electricity. It is the height of absurdity to talk of electricity removing organized adhesions without removing the patient also. In regard to the treatment by massage, if he attempted to so treat such a case as Dr. Kelly had so beautifully pictured on the board and as had been talked of by other gentlemen, he would not say that it would be indecent, but he was positive that he would lose the case; it would surely leave him and go to one of his fellow practitioners. In such cases the patient will hardly permit of the necessary manipulation incident to an examination on account of the pain produced, and she would never tolerate for one moment such procedure as had been advocated. He did not believe that such treatment was at all feasible.

Dr. J. Price said that in regard to the mortality, Dr. Chadwick, of Boston, says that he has had two fatal cases out of eighteen and that he has given up its use. With thirty-one hysterectomies in Tait's experience and no deaths, and thirty-eight in Keith's with three deaths, we see that the mortality following electricity has been greater than that of hysterectomy in the hands of such men as Tait, Keith, Bantock, Thornton and others. He had had a case similar to the one of Dr. Goddell. The pus was evacuated. He did not attempt to release the fixed uterus. The woman is now pregnant.

Dr. Taylor said that his experience had been chiefly with pelvic deposits. He had

used electricity very little in anti-flexion. In these cases rapid dilatation has relieved the trouble in a shorter time. In menorrhagia or metrorrhagia the curette answers the purpose sufficiently well, and in seventy per cent. of the cases it relieves the trouble. In regard to gonorrhœa, he would simply state that he did not deny that it may be a cause of pelvic trouble. He was very glad to hear of Dr. Drysdale's success in the treatment of fibroids, but he did not think we could conceive of an electrolytic action sufficiently active to cause breaking down of a fibroid unless there was an electropuncture.

Dr. T. H. Bradford said that if Dr. Baldy had seen the cases, to which he referred, at a later period he would have found that they had been benefited. The case of papilloma of the right broad ligament was one which nothing but operation could relieve. He was satisfied that great good could be done in some of these cases by the use of electricity. The result so far obtained has been satisfactory. Out of eleven cases there have been several cures and all have been benefited. He would continue to use this remedy and would at a later period give the society the results.

AN ERROR.

The *Pittsburgh Medical Review* makes a serious mistake in its reference to the Virginia Examining Board and the colleges which turned out the applicants for license to practice in that State. There are four medical colleges in Louisville; two holding sessions from October till March, and two from January to the middle of June. Each of the schools had applicants before the board. Only one of these suffered the mortification of having its graduates rejected. The Hospital College of Medicine of Louisville has not had one of its graduates fail before any examining board. Half a score of its alumni practice in Virginia.

PATHOLOGY AND HYGIENE.

TOXIC
INSANITY.

BY

WM. B. FLETCHER,

M. D.,

*Professor of Theory and
Practice of Medicine in
the Medical College of
Indiana.*Read to the Mitchell Dis-
trict Medical Society at
Seymour Ind., December
28, 1888.

By toxic insanity I would include all cases of melancholy, active or passive mania, which have their origin in a changed condition of the blood from effete materials, circulating therein which have been derived from normal materials of

the body; this "matter out of place" becoming a depressor or excitor of brain tissues—cells and fibers causing various mental phenomena—that are usually classified by symptoms only.

Toxic insanity has been suggested as a better expression, as it directly indicates the pathology of the mental disease, while the general classifications use only such vague terms as mania, suicidal, homicidal, kleptomania, etc.; dementia, inebriety, religious mania, etc., none of which terms refer to cause. All these forms of mania might be induced by one or more poisonous substances in the blood; either by direct irritation of brain cells, by thickening or thinning the circulating fluids, or by their irritant properties cause dilatation or contraction of the meningeal vessels.

Among the earliest writers, those who noted the subject of insanity, then called madness, attributed all mental alienation to some change in the fluids of the body, thus: Aretaeus says that "an alienation of the mind, fixed, or dwelling upon some one thought, without a fever, is due to atra-bile, or black bile." Boerhaave, collecting from all ancient literature, refers the changed mental condition to "thin blood or thick blood." Hippocrates, to the arrest of certain fluids which revert to the brain, such as the sudden arrest of the lochia, the changed condition of the urine, etc. Sarctarius, to arrest of perspiration, or lack of joy, which

he says "makes the pulse bound full and slow." Atreus, in speaking of the melancholy madness of certain literary persons, attributes it to the changed juices of stomach digestion; "how parsimonious is the diet, how exhausting the vigilance of those who meditate upon learned discourses and important affairs."

Again Boerhaave says, "Suppose melancholy to have gone before, all the secretions and excretions are more diminished in proportion as the thick atrability viscid is more accumulated in the blood, the reason is apparent why in maniacal patients almost all the excretions are either stopped, or else carried on but very sparingly. For such maniacal bodies are dry and juiceless, and often obstinately refuse all food and drink, hence they have no saliva to moisten their mouth and their urine is very little, or if foods are taken into the body they are with difficulty moved by peristaltic motion through the dry intestines, and the bibulous veins drink up all their moisture, so that they have but a few dried feces to be collected from them in the large intestines, where, being not thrown out, occasion stubborn costiveness that usually attends this malady."

Aretaeus says, "All the shining faculties of the mind are changed or depraved, or totally destroyed when the blood and humors, receding from their natural temperament and due quality, are not conveyed to the brain in a moderate and equable manner, but on the contrary with an impeded, slow and languid motion, or with too brisk and violent an impetus."

The modern pathologist of mental disease shows a strong tendency to look for all kinds of alienation to changed structure of the white and gray matter of the brain, to softened or atrophied cells and fibers, which may be secondary to disease of the vascular supply, and that change of vascular supply primarily to some constitutional or hereditary disease, as tubercle, syphilis, etc. The fathers of medicine knew little of the

pathology of the brain. General paresis, softening of the brain, sclerosis, atrophied or hypertrophied cells, cerebral localization, etc., had not been discovered. Yet we must give them credit for their management and remarkable skill in treating on a basis of true toxic pathology the larger number of cases that came before them. In fact such was their skill that chronic insanity is of modern observation, and hospitals for the treatment of the insane only a modern necessity.

It is not possible to state with any degree of accuracy the number per thousand who should be classed under the head of toxic insane, from the fact that there are few alienists or specialists in mental disease who are pathologists.

Comparative little attention is given to a careful examination or diagnosis of individual cases after they have been sent under their observation in large institutions; and even should they desire it, they rarely have the facts of the case and its history from the date of its development, a matter of great importance to form an idea of its origin. There are at least a dozen modern writers upon insanity who do not even mention urea, uric acid, or earthy phosphates, phosphorous bile, suppressed perspiration or lochia as causes of mental alienation; this may arise from the fact that most of the book builders upon this speciality are officers of State, rather than direct students of diseases affecting the mind. In fact, the duties of a superintendent of a large hospital for insane are rather executive than scientific.

It is my opinion that the greater proportion of acute and recurrent cases of mental alienation have as their origin some toxic element in the blood, and that more frequently it is derangement of the functions of the liver, kidneys, stomach, skin or lymphatics, while suppressed menstruation or lochia are less frequently a cause. Doubtless occasionally the presence of toxic substances foreign to the body, as lead, copper, arsenical poisons, may cause mental derange-

ment; but of these I will not speak at this time.

The first question is, by what means are we to determine when we have to deal with alienation from toxic causes? Clearly, we can not determine it by the variety of manifestations; the delusions and hallucinations or facial expressions and actions of a dozen patients would vary even from the same cause; and yet there is about as much similarity of symptoms as there would be manifested in a dozen men who have each drank eight ounces of whisky; no two would be affected exactly alike, and yet an observer would form the conclusion that most of them were suffering from temporary alcoholism.

With the exception of suppressed menstruation and lochia the course of toxic insanity is usually extremely gradual from its onset; there is no sudden shock as in emboli of cerebral vessels, and no lateral changes in the countenance as will be found when abnormal growths are producing pressure, or where the dura is contracting from an injury or sun-stroke. Syphilis and tubercle can be excluded by the history of case. There is frequent headache, mostly in the occipital region, when the case is uremic, and frontal when the liver is at fault.

The patient begins to notice a general languor, the muscles of the legs in particular feel tired, and the back is weak; in his habits he grows more negligent, and in character irritable and melancholy; if the patient is fat he will be observed to emaciate constantly, although regular and abundant meals may be taken. This condition of irritability may continue a long time before attention is called to the fact that he acts in a manner not in accordance with reason, and that his judgment is failing; suspicion of the words and acts of his friends and neighbors follows, and finally he is no longer permitted, or is unable, to attend to any occupation. With all these symptoms the phenomena developed is mental, until by emaciation and loss of strength the limbs

are unable to support the body, and the patient totters in his walk. The bowels are usually costive—as he has “dry bowels,” as Celsus terms it—and the skin is dry, the urine scanty and high colored; the patient is put to bed, but is restless, muttering, or stubbornly silent; he has no fever, and takes but little liquid of any kind. For the most part he hears well and knows all who call, and answers for a time in a correct manner any simple question, but when a general conversation is undertaken he loses connection and sometimes talks incoherently. If the toxic accumulation is increasing, a change frequently takes place and the patient raves, and works constantly with hands and feet and tosses about as persons do in the frenzy of typhus or typhoid fever. The pulse grows weaker and more rapid, the temperature goes below normal and the patient dies of exhaustion.

But in most of these cases the termination is not fatal. After going through most of the symptoms above mentioned the patient, even without medical aid, frequently has a crisis in the disease, when large quantities of urine are passed, or profuse sweatings occur, or a coliquative diarrhoea sets in, which is followed by profound and restful sleep, the appetite returns and the patient recovers and may be well for months, or even years, when again, through some exposure or disease, the same symptoms recur. In some individuals there seems to be a certain period of time required for the toxic principle to accumulate, and then a certain period for the elimination to take place, and it is likely these cases are akin to epilepsy, many cases of which have evidently a period for a certain amount of poison to accumulate and then the whole force of the poison is eliminated by an explosion, as it were, producing the epileptic convulsion.

There is not at all times sufficient evidence from the symptoms to point out if the toxic condition be produced by derangement of the liver, kidneys or stomach, or

that the lymphatic or cutaneous system be at fault.

It has not come within the range of diagnostic scrutiny to tell in a case of uremic poisoning whether the fault be in the water, the kidney, the renal arteries, or the liver, where urea is supposed to have its first composition, or in some disturbance of the vaso-motor nerves about the renal artery, or in the floor of the fourth ventricle which gives origin to fibers of the renal plexus.

The great work of the special pathologist is to find out the effects produced by the retention in the blood of all or a part of the normal daily twelve grains of urea, or the thirty grains of earthy phosphates, or of phosphorus being uncombined, or the varying qualities of ammonia not being eliminated. And what difference of symptoms will we have if on the one hand these normal constituents of the urine are simply not eliminated by reason of diseased renal organs, or, on the other hand, are not elaborated from the various changing tissues.

In cases of yellow atrophy of the liver we have insanity developed, which may be brief in duration or extend over several months. In this disease there is a great diminution of urea, and biliary salts appear in the urine; the blood is changed also, that it largely loses its coagulating principle and contains lucin and tyrocin. To which of these unnatural elements and conditions shall the mental obliquities be attributed?

Is it not probable that when disease invades the parenchyma, of the liver, pancreas, kidney, or mesenteric glands, that their fluids are changed, as their functions are interfered with? These fluids at all times hold in their compounds poisonous elements that we know to be brain excitants or depressants, and that the mental derangement in such cases is no more indicative of change of brain structure than are the effects of morphia or alcohol. It is certainly folly in such cases of toxic insanity to be treating cerebral disease when it never exists, and bears about the same relation as

taping does for the cure of dropsy, a procedure for relief and not for cure.

The symptom when due to toxemia from urea is most marked by the peculiar odor which arises from the breath and skin; it is the same peculiar odor observed as emanating from many epileptics at about the time of an attack. A quantitative analysis of the urine passed in twenty-four hours shows one-half or less the normal quantity, and sometimes an absence for various periods of two or three days and then a return in small quantities as the patient recovers. The urine may contain traces of blood, or albumin is usually small in quantity.

When the earthy phosphates are no longer eliminated the insanity is usually of a milder type; a deep melancholy, evinced by a desire to be alone, a feeling of suspicion and resentfulness towards friends, a "bad taste" to every substance which causes the patient to believe there is an endeavor to poison him. The urine is rather clear and may be copious; the microscope fails to discover the ordinary crystals of ammonio magnesian phosphates and crystals of uric acid are diminished. When the toxic condition is from disease of the liver suppressing elimination of bile, there is frequently stupor or moroseness, rapid emaciation and lack of appetite, but followed as the disease becomes chronic, with an insatiable craving for food, when the patient will eat or drink the excrements of the body, rags, paper, or anything in fact that can be swallowed. The appearance of the patient in the latter stages is much like that described by Flint, in dogs that have the bile diverted from the intestine. The feces are white, chalky and create a most tormenting constipation.

The cases of mental derangement from suppression of perspiration are not so slow in manifesting the symptoms as the other forms. Thus in two patients exposed to cold when over-heated, sweating or greatly fatigued they began to "act curious" within a few hours, became silent for forty-eight hours, knew all that was

said, but would not speak; this was followed by stubborn resistance to all advice of friends; they were harmless when let alone, but dangerous if any forcible restraint was attempted. The skin was dry, tongue coated and all the symptoms given in a case of deficiency of urea may be noted, except the breath has a strong ammoniacal odor.

The treatment in all these cases is to restore elaboration of and elimination from the body, the toxic principles which are irritating the brain. Among the first remedies is the hot air or steam vapor, both followed by massage, twice daily. If the skin be at fault the mental excitement will be greatly allayed by five grain doses of acetanilide, given every hour until the perspiration begins. This remedy is empirically used, but that it diminishes blood pressure and acts upon the sweat glands, without producing derangement of digestion, are matters of every day observation, and the amount of uric acid has increased in the urine in the three cases when examination was made by a skillful chemist.

The cases of insanity from menstrual or lochial surpression are treated on the plan of restoration of those functions. My observation is that the majority of cases of this variety of insanity recover with ordinary care, but the disease is liable to recur.

As a remedy for quieting the patient, if such is required, I would rely upon hypodermic injection of hyocine or hyocyanine $\frac{1}{50}$ to $\frac{1}{25}$ grains, but if the patient will take medicine by the mouth, grain doses of paraldehyde every two hours, given in dilute alcohol, brandy or whisky. Chloral in fifteen grain doses, combined with one-fourth grain morphia, answers when the former fail.

Besides all the ordinary remedies to eliminate the poison and those that quiet the patients, we must not forget that there is yet one other adjunct which is required in all cases of violent forms of mania as well as the quiet, subdued kinds: that is, darkness, quietness and educated skilled nursing; a total removal from sights and sounds that

annoy, for lights, noises, strange faces, or even familiar ones, frequently add fuel to the poison which is exciting the brain, and aid in producing exhaustion which may either prove fatal to the patient, or, what is worse, cause a curable disease to become permanent. In feeding the patient it should be attended with great caution, and never forcible feeding unless starvation is pending, and then milk or other fluids should be injected into the stomach through a soft catheter through the nose. Finally, let general practitioners feel that with a little patience and correct appreciation of causes, they may treat their cases well at home and save the annoyance of their being sent to and perhaps dying in a public institution.

<p>MARINE JOURNALISM.</p>	<p>Our Marine editor says, when the American Medical Association was young, it undertook the business of regulating medical education, fixing a high standard of preliminary education, and a college course of six months. The organization met with opposition. "Then, as now, the head and front of the opposition clique was in New York. Then the opposition was centered upon the matter of membership, now it is upon an alleged code of difference." This might seem very well, if there were really any active open opposition to the National Association; but, coming from the official organ of the national body, it would seem the whip has been raised to drive New York out of the profession, or into submission. The truth is, many of the best men have been alienated by this kind of policy. What we need is, an editor who will devote himself to the publication of the literary and scientific proceedings of the association, in order to acquaint the world with the good work done. It is not believed by many who have not recently attended the meetings, that, all the sections are well attended; That they do more special work and have each a larger membership than any of the so-called "American Associations" of specialists,</p>
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BOOKS AND PERIODICALS.

CLINICAL
LECTURE ON
DISEASES
OF THE
NERVOUS
SYSTEM.

BY

PROF. J. M. CHARCOT,
*Of the Paris Faculty of
Medicine; Physician to
the Salpêtrière, etc.*

Translated by E. P. Hurd,
M. D., Massachusetts.
George S. Davis, Detroit,
Michigan, 1888.

This is one of the Physicians' Leisure Library series, and represents in convenient form the best literature of the subject. Charcot is the greatest clinical neurologist in Europe, and these lectures are written in the most charming style. There are not many persons engaged in such work who translate French into good English,

Dr. Hurd, however, without losing an atom of the French idea, makes of the text the very best of English. The work opens with a biographical sketch of the great Frenchman, following which appears a chapter on Spiritism and Hysteria, in which are related the sad effects of this vaguery upon the minds of three children in one family. The second lecture treats of the value of isolation in the treatment of Hysteria, Chorea, muscular atrophy of various kinds, and contractures of traumatic origin are clinically and critically considered. The work is concluded by a detailed account of six cases of hysteria in the male subject. Mr. Davis deserves well of the medical profession for presenting such an excellent character of literature in such cheap and convenient form.

PHYSICIANS'
INTERPUTER.

In four languages, specially
arranged for diagnosis,

BY

M. VON V.

F. A. Davis, Publisher. 1231
Fitzbert st. Pailadelphia,
Pa. 1888.

This is a curious little vest pocket edition, handsomely bound in flexible red Russia leather, gilt edged; with blank pages for memoranda. The languages employed are the English, French, German and Italian.

The text reminds one of the "English as she spoken." For example, "Say it once again; "Let the operation be made;" "Are they yet living;" "You don't perhaps know?" "Since when is your tongue of that color?" "Since when do you cough?" The French and the German phrases are in keeping with the structure of the English. If such works have any value it must be rather to amuse than instruct. It is evident the authors vernacular is German, although he attempts to put the phrases in such form as to be both simple and expressive, conforming as far as possible to the English idiom; and, like good old John Brown, who wrote his elements of medicine in Latin, and then translated the whole into English, it is fair to presume M. von V. wrote his "Inter-puter" first in German and then translated the phrases into English, French and Italian.

POCKET
MEDICAL
FORMULARY.

Arranged Therapeutically
by

ALEXANDER HAZARD, M. D.

Revised and enlarged

BY

A. S. GERHARD,

A. M., M. D.,

Professor of General Pathology, Medical Jurisprudence and Clinical Medicine at the Medico-Chirurgical College, Philadelphia.

With an appendix containing formulas and doses of hypodermia medication; a table of eruptive fevers; and, poisons, their symptoms, antidotes and treatment. Second Edition. Philadelphia: A. L. Hummel, M. D., Publisher, 224 South Sixteenth street.

as a work of ready reference in the study of therapeutics. It may be bad practice to offer hand-books to students, but like all other rules, which are said to be proven by exception, this must be accepted as the exception.

A neatly bound pocket book with tuck and pocket of 334 pages, admirably adapted to the purposes of refreshing the memory in emergencies, and serving as a convenient and reliable reference for the general practitioner. The formulæ are correctly written and are either new, or such as are in general use at the present day. The work may therefore serve as a good model for the correct writing of prescription as well

CORRESPONDENCE AND SOCIETIES.

ABDOMINAL
SECTION,
HYSTERECTOMY.

CARL BRAUN,
BILLROTH.

From our special correspondent, Dr. Fayette Dunlap, of Danville, Ky., Vienna, Dec. 20, 1888.

With many regrets I left the pleasant city of Munich and turned towards the Mecca of all wandering medical students, especially the Americans. There was no difficulty in

gaining admission to the various places of interest and it is the experience of every visitor that the members of the University Faculty and hospital staff vie with each other in extending a cordial, courteous welcome. From friends on both sides of the Atlantic I had letters to members of the profession in positions to make my sojourn profitable and not unmingled with those social features which contribute in no small degree to favorably impressing the stranger within the gates.

Prof. Carl Braun took me under his protecting care and fortunately had a remarkably interesting series of cases in which could be illustrated his methods of dealing with certain conditions of diseased processes. His operation for removal of malignant uteri does not materially differ from those already described in former letters. Several operations were performed for this condition and it is gratifying to report that the patients made good recovery from the immediate effects, but it is furthermore certain that the percentage of recoveries is not such as to justify the claim from some sources that it is a legitimate surgical procedure. The records are carefully compiled and further experience may advance its claims.

An abdominal section was done on a dwarfed rachitic woman who has an interesting surgical history. Four months before she became pregnant and aborted at an early date and the medical attendants discovered that she had a narrow pelvis and delivery at full term would be an impossibility.

In order to prevent the possibility of conception Braun removed the uterus and ovaries. Since the operation she has had constant pain in the pelvic region, and it was decided to make an exploratory incision. Several small indurations (inflammatory) were found within the pelvic cavity besides a hæmatocele of tolerable size. There were indications that there had been such collections from time to time and these indurations were the remnants. After eight days this patient was in excellent condition add no doubt promptly recovered. Full antiseptic precautions are carried out by Braun both in this charity and in private cases. Chloroform is the anæsthetic universally used in this hospital.

Personally Braun is popular as a teacher and practitioner and enjoys the reputation of having the largest obstetrical practice in Vienna. He is a courteous, affable gentleman and takes a personal interest in those who visit his clinic.

He is the consulting obstetrician to the immense lying-in department of the Vienna hospital and it has been largely through his influence that this particular branch has reached its present admirable degree of success.

There was done in his wards a few days ago a Cæsarian section which at present writing promises to save both mother and child. Unfortunately I was not present and will only refer to the operation but cannot go into a detailed account. Much interest is being taken in this operation and the vast opportunity offered by this great hospital will soon demonstrate its practicability. I failed to get the name of the operator but he is a resident and is assistant to Prof. Breisky who is well known through his contributions to obstetrical literature.

No one visits Vienna without seeing Billroth and no one is more deserving the homage which his great name exacts. I had the good fortune to be presented to him by a personal friend of his with the promise that I would be given special privileges.

These were graciously accorded and a close inspection of his methods readily explains his great success. Indefatigable industry and a clear judgment he possesses to a marked degree. I never saw a more graceful cautious operator. On operating days he is usually engaged for two or three hours and by rigid discipline and system is enabled to accomplish a vast amount of surgery within his specified time. He does not limit himself to any particular branch but attends to all as they present themselves. In a single day he did an ovariotomy, removed a sarcoma of heart, resected a knee joint and did an external urethrotomy. As antiseptic surgery has taken such a firm hold on Germany it is to be expected that Billroth is one of its foremost advocates. The perfection of cleanliness is reached in his work and whatever his opinion may be regarding the so-called antiseptic agents usually employed they are always in use in his department. Day after day he can be found engaged in a promiscuous array of cases as referred to above.

Lately he has had a series of interesting operations for intestinal perforations, fistulæ, artificial ani and the results obtained have been quite encouraging. The limits of this letter will not permit my giving the particulars, but will impose upon the indulgence of your readers at some future time.

I can only refer at this time to the admirable opportunities afforded by this vast hospital for medical instruction. It is thoroughly appreciated too as the presence of a small army of students from every country on the globe attests. The countrymen are here in great number and my observation is that they are industrious, capable young men and from them we can reasonably expect a considerable number to be the leaders in professional thought within a brief span of time.

Living is reasonable, but there is some complaint that the fees for special courses are far too high, and that these courses are taught by men hardly qualified for such im-

portant positions. Ambitious, studious men are attracted hither by the greater lights and it is a just cause of complaint, that after awhile they are forced to accept the services of obscure men, who secure classes by extensive advertising. Again, there is another feature which will bring the great school into disrepute, unless rectified. Certain hours are published when these classes are to assemble and it is not uncommon to find a notice posted up, that it will be impossible for Professor so and so to meet his class at the appointed hours.

This occurs far too often and young men who cross oceans and continents to take advantage of the superior instruction and opportunities here offered, value their time for too dearly to be trifled with after this manner.

These objections are reasonable ones and it is to be hoped that they will soon disappear.

Every department is made use of for instruction and this great centre controls the medical thought of a large part of the civilized globe.

My next letter will be sent from Leipzig or Berlin, where I am sure to find large fields and great interest in professional work.

THE MOFFITT-WEST DRUG CO.	The Moffitt-West Drug Co., is the style of the new firm that will succeed the Richardson Drug Co., of St. Louis, which was destroyed by fire on January 1, 1889.
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The new firm is composed almost entirely of men who were with the Richardson's before their misfortune. Mr. John Crouch, well known to the profession and drug trade as the manager of the Phenique Chemical Co., will have charge of the drug department. While every one deplors the fate of the Richardson Drug Co., it is gratifying to know that their mantles has fallen on such able and worthy shoulders.

PROGRESS

A MEDICAL MAGAZINE ISSUED MONTHLY.

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VOL. III. LOUISVILLE. FEB. 1889. No. 8.

THE ASSOCIATION JOURNAL AND ITS EDITOR.	From the first it has been clearly apparent the recent change of editors was only a tempory makeshift. It has been equally clear the new editor had
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some personal scheme to advance. The persistent publication of the Marine Hospital News in the editorial pages, and the frequent references to congressional legislation are at last explained in the announcement that, the salary has been increased fifty per cent. and the tenure of office of the Supervising Surgeon General of the United States Marine Hospital Service established for life. The sixty days leave of absence instead of the resignation of Genéral Hamilton created a widespread feeling of distrust of the newly appointed editor of the Association Journal. It is, however, unfortunate to have placed a person in such an important position, who should take advantage of it for mercenary purposes. It is one of the solemn duties of the editor of the organ of the great national body to cultivate fraternal feelings between all the members of the regular profession, and thereby strengthen the organization. The editorial of February 2, 1889, is offensive to the friends and the enemies of the association. It accuses the profession in New York of being the "decendants of the

ancient enemies of the association, anxious to crush it now;" etc. It is a fact that many of those who have been recently estranged, are preparing to take part in the proceedings at Newport next June. If the Association Journal attacks them, and denounces them as enemies, may be they will stay at home; and, thus it is plain editor Hamilton will diminish the membership instead of increasing it.

If what he charges against certain members at Cincinnati be true, he owes it to the good name of the association to present the facts to the judicial council for action. The editor of PROGRESS was a member of the nominating committee and he takes this opportunity to contradict the statements of editor Hamilton, in reference to any matter of "office seeking mania" being quieted by the action of that committee. The trustees should engage an editor, who can be trusted to engage in the work of impersonal journalism; one who can unite the profession, and abstain from political campaigns for government office.

SNOBBERY.	<i>The Medical Record</i> has the following: "The Duke, Charles Theodore, brother of the Empress of Austria, is both oculist and surgeon, and is very skillful. Whenever he operates, all the regular arrangements are upset, the whole staff is required to be in attendance on him and he must be addressed as "Your Royal Highness." When the Duke goes to Vienna, he often passes whole days in the general hospital, and if there are any arms or legs to be cut off, he hastens joyfully to the work."
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There are plenty of Americans ready to pay court to such swells. There is a surgeon in the Ohio Valley who struts about the operating table with a great deal of pomp, having half dozen or more assistants, and a great spread of instruments, in the most trivial operations, such as the amputation of a finger, or the opening of an abscess.

PUBLISHERS' DEPARTMENT.

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PROGRESS

A Monthly Magazine for Students and Practitioners of Medicine.

"I HOLD EVERY MAN A DEBTOR TO HIS PROFESSION; FROM THE WHICH AS MEN OF COURSE DO SEEK TO RECEIVE COUN- TENANCE AND PROFIT, SO OUGHT THEY OF DUTY TO ENDEAVOUR THEMSELVES, BY WAY OF AMENDS, TO BE A HELP AND ORNAMENT THEREUNTO. THIS IS PERFORMED, IN SOME DEGREE, BY THE HONEST AND LIBERAL PRACTICE OF A PROFES- SION; WHEN MEN SHALL CARRY A RESPECT NOT TO DESCEND INTO ANY COURSE THAT IS CORRUPT AND UNWORTHY THEREOF, AND PRESERVE THEMSELVES FREE FROM THE ABUSES WHEREWITH THE SAME PROFESSION IS NOTED TO BE INFECTED; BUT MUCH MORE IS THIS PERFORMED, IF A MAN BE ABLE TO VISIT AND STRENGTHEN THE ROOTS AND FOUNDATION OF THE SCIENCE ITSELF; THEREBY NOT ONLY GRACING IT IN REPUTATION AND DIGNITY, BUT ALSO AMPLIFYING IT IN PROFESSION AND SUBSTANCE."—BACON.

VOL. III.

LOUISVILLE, KY., MARCH, 1889.

No. 9.

GENERAL MEDICINE.

FEVERS IN CHILDREN.

BY

JOHN A. LARRABEE,

M. D.,

Professor of Materia Med- ica and Therapeutics and Diseases of Children, in the Hospital College of Medicine, Medical De- partment of Central Uni- versity of Kentucky, Lou- isville.

Read in the Section on Dis- eases of Children, at the Thirty-ninth Annual Meeting of the American Medical Association, May, 1888.

In inviting your at- tention for a few mo- ments to some points in the management of child fevers, I am fully aware that the subject is trite—that it has been thoroughly written by far more scholarly pens, and that in a texture so well woven it would be hard indeed to cull even a few threads of purely original

thought. My apology, if apology be neces- sary, must be found in this—that it is not the rare and infrequent diseases which most perplex the practitioner, but oftener the most common departures from health. The phenomena which constitute a coryza are certainly familiar, but the treatment of a "bad cold" is an opprobria medicorum. No less familiar to our observation is the phenomenon of fever, and no more explicit is its etiology.

The object of this paper is to provoke a profitable discussion upon the mechanism of fever, to ascertain, if possible, the object which nature designs to accomplish by its inauguration, and to determine what means are best calculated to promote that object and hasten the return of the patient to a state of health. The vast amount of litera-

ture, and the widely diverse views of the most celebrated authors, render it apparent that still more careful study is necessary be- fore the practitioner at the bedside can an- swer these questions with entire satisfaction to himself or to others. The fevers of childhood known as the eruptive fevers, or exanthemata, require no separate allusion. As a class they have been observed through so many centuries and are so well under- stood that they shall form no part of this paper.

The existence of nerve centers in the brain and spinal cord, whose function is to preside over calorifaction, is universally acknowledged, if not conclusively proven. These centres, when disturbed, are found to be both excitant and inhibitory. Hence fever may occur either by an increase in heat production or a prevention of its dissi- pation. I see no reason why nerve force may not be transformed into heat, as in the current of electricity. The introduction of morbid material, in microorganisms, and their rapid reproduction within the body as a cause of fever, is also generally accepted. Fevers originating in poisonous effluvia have been properly called "pythogenic" by Murchison. If to this class we add those which are symptomatic, the classification of child fevers would be sufficiently extensive. We can no more conceive of an idiopathic fever than we could of an idiopathic hyper- trophy of the heart of any other internal organ. Suffice it, then, that in whatever manner fever may be produced the process

is the same, and denotes a resistance on the part of the body toward its enemies. The character of the fever and its duration also marks the constitutional vigor of the patient. As a general rule, those belonging to the sanguino-nervous temperament are good fever patients, and those of a phlegmatic habit succumb more readily. Pain has been termed very aptly "nature's alarm bell," and the interminable net-work of nerves of sensation has been wisely arranged for this purpose. Fever may be termed the red light of danger, and wherever this signal flashes it is a warning to go slow. The fevers of childhood are sudden in their occurrence, short in duration, and aside from involvement of internal organs or other complications, tend to recovery. By far the greater number are symptomatic in origin, and subside with the removal of the cause; such are denominated *ephemera*, or *febricula*. Fever, however produced, denotes the ability of the organism to fight the cause. There is much truth in the statement that "who caught up a fever can get well." In our search for extraneous causes we are apt to ignore the possibility of internal origin.

In my experience these constitute by far the most frequent causes of child fever. It is all very well to examine into the sanitary condition of our houses, to inspect the sewerage, the drainage and ventilation, to be careful to sleep high and avoid dampness and marsh miasm—but there are thousands of individuals who are hypersensitive and hypocritical upon the point of house sanitation, whose bodies, the soul's dwelling, are defiled in every possible manner. We read much of the consequences of choked drains, while we suffer the intestinal tract, the "cloaca magna" of our bodies, to be packed, and to germinate bacteria, and ptomaines more potent than marsh miasm in the production of fevers. We are hardly yet beginning to appreciate the consequences of chemical changes and fermentation within the body. The subject of *ejeesta* is as important as that of *injesta*, and the

bacillus subtilis in the intestinal tract may yet prove as important for our study as the *bacillus typhoideus* now supposed to be *the* cause of fever. Moreover, all children are not alike prone to fever. What child physician has not become familiar with fever families? and upon careful examination the children will be found those whose diet includes luxuries and dainties, thus stuffing and clogging excretory organs, and excluding necessary and healthful exercise in the open air. To my mind it is possible to have such a complete and perfect action of the various functions of the body, that not only will not cause disease to exist within, but if these causes be brought from without into the body, they will be repelled. There can be no doubt that when the skin is kept in a perfect condition the interchange of gases takes place after the manner of the lungs. Elevation of surface temperature indicates a lung action in that part. A diagnostic point upon which I place the greatest importance in infantile pneumonia is, that the elevated temperature corresponds to the affected lung.

The care of the skin, both as to prophylaxis and treatment in fever, is second to no other consideration. It is now known in physiology that while every organ has its particular function, there is no organ which may not assume the duties of others, and that vicarious action is oftentimes the salvation of our lives, by which we escape the punishment of our own neglect. The ferments designed for digestive purposes may be changed into most virulent poisons, as they are themselves excrementitious. Hence the treatment of child fevers becomes at the same time the prophylaxis, and should include the following important considerations:

1. A greater abundance of pure fresh air.
2. Anti-thermic rather than pyretic medication.
3. Careful regulation of the diet of the patient.
4. The daily ablution of the whole body

in water at a temperature agreeable to the patient.

5. A forced dilution by frequent draughts of water or other fluids.

6. Very little medicine, and such medication to be restricted to the indications of nature in diseases.

<p>IDENTITY OF REMITTENT AND TYPHOID FEVER IN CHILDHOOD.</p>	<p>All authorities agree that typhoid fever is exceptional in infancy, rare in early childhood, and becomes more frequent as we approach adult years.</p>
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It is possible that statistics upon infantile fever may be considerably changed, especially between the ages of five and fifteen years, by a more careful observation of cases called remittent fever. It was at one time believed that rheumatism was a rare disease in childhood, until a trained observation overthrew the traditional "growing pain" of the nursery, and threw an important light upon the occurrence of serious cardiac lesions originating in infancy and childhood. It is to be regretted that no settled conviction exists in the minds of practitioners in regard to what constitutes a remittent and a typhoid fever in the child. Under the idea that typhoid is to be excluded at an age indefinitely fixed by statisticians, we find many excellent physicians conducting a case with all the anorexia and pyrexia, the characteristic tongue, the tympanitic abdomen, the ochre stools, and the delirium of typhoid fever, through fourteen or twenty-one days of time, under the diagnosis of remittent or simple continued fever; often as entero-colitis, and still oftener as a typho-malarial attack. It is not at all unusual in such cases to find that the diagnosis also has undergone several changes, entailing a useless if not a positively dangerous variation in therapeutics. If there be no practical difference between these diseases, why preserve the nomenclature? Strike the name of remittent fever from the nosol-

ogy of children's diseases. I am aware that a more careful study of disease naturally results in further division, but it would seem here that increased knowledge leads to a more complete concurrence of opinion that remittent, so-called, and typhoid fever in the child are synonymous. I can not but think that such a simplification would result in a purer practice and a lessened mortality.

W. H. Day, in his excellent work on "Diseases of Children," writing upon typhoid fever, makes use of the following language: "I must disavow at once any belief in an infantile remittent fever as caused by a separate and distinct poison, or that the disease differs in its nature or causes from typhoid. I can conceive few greater blunders in practical medicine than to consider this a separate and distinct affection, not following the same course as typhoid fever, and not leading to the same complications." Further on the same author concurs in the idea that the term remittent fever should be limited to the mildest cases, which run a short course without developing the severe typhoid. Such cases have no rash and appear to be due to a depraved condition of the alimentary canal. Dr. J. Lewis Smith admits the similiarity of the two diseases but endorses the existence of a remittent fever in childhood arising from dentition, worms and gastro-intestinal inflammation. The same author describes an essential remittent fever due to malaria, to which he devotes a very short chapter. But under the head of typhoid fever, in his excellent treatise, we find the following suggestive sentence, "It (typhoid) is probably more common under six years than is commonly supposed." Dr. West is clear upon the identity of typhoid and remittent fever, while Hillier advises the term remittent to be ignored. Again there is no good reason for retaining the name remittent to be applied to a mild form of typhoid. What untold evil continues to result from the idea engrafted upon the laity that scarlatina is a diminutive? Do we not

recognize grades of typhoid in adult practice? Not over eighty per cent. have the characteristic eruption. What grades exist between the "walking case" and the severer forms? Most of the writings upon remittent fever are so filled up with exceptions that they are entirely valueless to the practitioner.

We are living in a period of the world's history unprecedented in brilliancy. The developments made by the microscope and by vivisection are wonderful, and have revealed a previously hidden creation. The fabric of past theories of disease has been shaken from turret to foundation stone. Synthetic reasoning is prolific in theories, but no sooner do we seize upon one than it dies in giving birth to another. Cast upon the medical world decked in the gorgeous attire which genius alone can give, they dart across our mental horizon and go out in darkness. The microbial craze has seized upon our vital pathology while poor old lame and worn-out therapeutics comes hobbling along in the rear, scarcely daring to breathe and ready to apologize for being in existence at all. We have indeed been led into new pastures, but not beside still waters. So far the treatment of fever by attacking the bacillus has not proven a success. Like the Hebrew children, we take our harps down from the swaying willows and turn our thoughts again toward Jerusalem.

Considering that fever is but the evidence of the warfare which nature has inaugurated against a foreign or domestic foe I prefer to speak of the management rather than the treatment of child fevers. The maxim which I endeavor to keep before me in child practice, "Childhood is a period of life requiring the greatest amount of knowledge and the least amount of medicine." If, as I know is true, I use less quinine among children than my fellow-practitioners it is because I have found it unnecessary when a careful attention has been paid to the secretions and excretions. There are

certain well-known requirements in the management of a fever which accepted by all are followed by none: A large airy chamber—if possible an upper room—with free ventilation, an exposure to sunlight, an abundant supply of fresh water for bathing and drinking, a very light diet, and a kind and obedient nurse.

If, as is commonly the case in children, we are called early for the anorexia preceding the fever, or in the first week of typhoid, the following routine is ordered: an effectual evacuation of the stomach by ipecac and warm water, followed by hourly doses of $\frac{1}{10}$ gr. calomel for twenty-four hours; a warm soap and water bath, a regular soaker; clean linen and underwear, both on person and bed. This occupies two days of treatment, and when well done one-third of the cure has been effected. If the fever be an ephemera or febricula often the entire cure is accomplished. If at this stage there is still a doubt as to the fever being malarial and not typhoid, I order suitable doses of muriate of quinine perfectly dissolved in muriatic acid and syrup of orange; this is administered in such doses and intervals that malarial complications may be left out and a diagnosis arrived at early. So soon as this fails to control the fever—and it becomes apparent that we are dealing with the specific cause quinine should be stopped, nor should it again be given until convalescence may call for its tonic action. A tumbler of water containing dilute muriatic acid is placed near the patient and sipped occasionally through a bent glass tube, and the fever coil is applied to the head if restless. Food is not urged, but it is necessary not only to allow but to urge that frequent draughts of water be given, and along with this I use very small doses of morphia or opium throughout long-continued fevers, especially in typhoid. I find that small doses of opium stimulate the brain and support the nervous system far better than food, while many authorities agree that the elimination of urea is increased by it. There is

no medicine in typhoid equal to small, very small, doses of Tully powder when symptoms of restlessness or delirium are present.

REDUCTION OF
TEMPERATURE
IN FEVER.

Fashion rules in medicine no less than in society—to be out of fashion is to be out of the world. His-

tory repeats itself, and no sooner does the great pendulum reach the utmost limit than it begins to sway slowly backward. Abandoned remedies become new, and old exploded ideas are again worshiped at our shrine. A few years ago the medicine man at the bedside of a little sufferer had but one thought, and that was temperature. Society meetings developed into a few patient listeners to long lists of hourly thermometric observations, in which all other symptoms, even the disease itself, was lost sight of. The temperature man with his lengthy tables has had his day, and we instinctively take a full breath of comfort in the belief that he will not return.

I have no doubt that very many persons have succumbed to the Don Quixotic fight waged against temperature alone. It is an extremely hard pull if the child has to contend against two forces: the specific poison of the fever and the toxic action of medicine. I hope no one will infer from these sentences that I have discarded the fever thermometer, on the contrary, I rely implicitly upon its teachings; I use it just as an experienced seaman would use the lead, not in plain sailing but when approaching a lee shore. The minute predictions which some doctors are able to make by degrees and fractions upon a thermometer is suggestive of a story I once heard of a Nantucket sea captain who tell his soundings and fix the exact position of his ship by the smell of the lead. One of the crew wishing to test the old man's power of discernment carried, the next voyage, some ground dug from his own garden. When, after the voyage, the ship was returning and the lead

was ordered to be thrown the sailor opened the sack and rubbed the lead into it before taking it down to the cabin. "Great Heavens!" exclaimed the captain, "Nantucket has sunk and we are at this moment over old Nancy Hackett's garden."

Hydrotherapy reaches its maximum of usefulness in the fevers of childhood. The greatest possible extremes, however, have been reached in the application of cold. Such frigid packs as are recommended by authors in Ziemssen are certainly opposed to what we know of heat production and heat laws. It is not surprising that they have found so few advocates in our day. Driving the heat from the surface is no more reducing the temperature of the blood than surrounding a fire by a wall is reducing the heat within the furnace. Any application of cold which causes a continued horripilation of the skin, must necessarily produce internal congestion, and the statement made by advocates of the ice pack, that such complications as bronchitis and pneumonia would have occurred independent of such application must be taken *cum grano salis*. In children moderately ill of fever a warm bath should be given daily, preferably in the evening. In those who are too ill to be removed from the bed, the warm, wet pack is to be preferred. So great is the benefit accruing from filling the cutaneous vessels and the sedative effect of moist vapor upon the nervous system that anodynes are unnecessary. The same procedure is equally beneficial in acute infectious diseases.

That dimethyloxy, quinin, antipyrin, and acetanilide are able to reduce fever heat no longer admits of doubt. The *modus operandi* is a matter of more important consideration. It has been established by numerous experiments, that an antipyrin and an antifebrin inhibit the organizing power of the blood corpuscle. In this strangulation the latter is far more powerful. That this explanation is not alone able to account for the action of these wonderful drugs, is shown in the fact that other agents,

possessing still greater power are found to be less efficacious. I am convinced that all the compounds of phenol and salicylic acid, the chinoline derivatives, exert an anæsthetic effect over the heat centres before mentioned. It is easy to conceive how drugs which interfere with oxygenation and which cause the oxyhæmoglobin to be replaced by metohæmoglobin can become dangerous. Neither of these drugs should be used in the consolidated lung of pneumonia or pushed when there is evidence of retained carbon dioxide in the blood. In uncomplicated typhoid I regard antipyrin safer and more efficacious than gelsemium, aconite or veratrum. I know of no advance in therapeutics of more practical importance than this: that with the same agents with which we reduce temperature we allay pain and quiet reflexes without the use of narcotics.

Practically I have obtained the finest possible effect from the phenate of ammonia in the fevers of childhood. I have made very extensive use of the preparation known as M. Declat's Sirup Ammonia Phenique, both in the gastric or fermentative fevers and in the several forms of typhoid; and I can certainly substantiate the claim made by the manufacturer of nascent phenic acid to be well founded. I am satisfied that Drs. Jackson and Barnett, of Wisconsin, and M. Robins are correct in the statement that according to the accepted theory of heat production in fever, ammonia is the proper base for phenol and salicylic acid. I have never met with as good results from prescriptions filled at drug stores where ordinary carbolic acid is dispensed. Phenic acid requires not only great pharmaceutical skill in its manufacture, but also in its preservation in the nascent state.

his most admirable and exhaustive address before the Ninth International Congress, devotes much space to the good effects of alcohol in the treatment of fevers, and places great stress upon the wonderful tolerance presented by the patient, making this tolerance the guide to the quantity to be exhibited. His words are, "that in fever only such quantity of alcohol as is readily oxidized is useful," also that its use is "to supply heat and save waste of tissue in fever." "It is not unusual," says the same author, "to administer from sixteen to thirty-two ounces of brandy in twenty-four hours." Bartholow says, that from one ounce to one and a half ounces may be oxidized under twenty-four hours, the excess must be eliminated as pure alcohol and acts as alcohol upon the nerve structures and tissues. Alcohol is a food only in the most restricted sense of that term. As a stimulant it is often needed and I do not hesitate to use it under such indications. It is rapidly followed by depression, and requires as much care and judgment as the more dangerous medicines. Germinal tissue is killed by alcohol, and I have never seen a child fever treated by alcohol which I thought could not have been better treated without it. The claim that alcohol in enormous quantities saves life in snake bite, dissection wound and diphtheria is based entirely upon its stimulating properties and not upon its apyretic action as a respiratory food. All that ought to be said of it in fevers is, that when indicated as a stimulant in grave atony, its use is not contra-indicated by the high temperature present. Diluted with water and sponged upon the naked body, it is certainly beneficial in abstraction of heat, and the same effect is delightfully refreshing.

ALCOHOL	The want of definite knowledge of the action of alcohol in the system is productive of very serious errors in its favor. Professor Austin Flint in
IN FEVERS.	

FEEDING	Nothing pertaining to the treatment of fever can be of greater importance than diet. Few doctors are sufficiently explicit in their directions. It
IN FEVER.	

is a subject which has been characterized by the greatest possible extremes. It is possible that in olden times patients were starved to death by the doctor; and it is equally true that in the attempt to reform this treatment hundreds and thousands have died of over-feeding. The desire expressed by Graves, that his epitaph should be, "he fed fevers," is as likely to perpetuate error as truth, and the injunction, "Don't let your patients die from starvation," does not preclude the idea that they may be killed by over-feeding. Dogs may be prevented from going mad in August by killing them in July. The danger at present is entirely in the other extreme to which we have been carried by gazing upon the spectre of inanition. Nothing is more common than to find the young and inexperienced practitioner stuffing a fever patient one hour with quantities of milk and egg-nog, and the next with beef-tea and peptonoids and bovine, and the next with medicine, until it is impossible to find an unoccupied hour for sleep. Actually the amount of food fed to fever patients under the dominant idea of preventing exhaustion, in a single day, would be sufficient to sustain the life of a well child for a week. I have seen children ill with typhoid fever suffering from retained curds of milk cheese as large as my fist at a time when danger from intestinal ulceration was imminent. Their cries of pain being attributed to tumefaction, opiates would be freely used to restrain the action of the bowels. I have never seen any good result from forced feeding in typhoid fever. It is granted that fever produces certain changes in the digestive organs rendering the assimilation as well as the digestion quite impossible. Such changes are noted in the peptic glands, pancreas and liver, while the saliva—the first essential—is wholly inadequate to do the work of ptyaline.

Upon this point Dr. Flint says: "The practical skill of the physician is taxed to the utmost in individual cases to overcome these difficulties; but judicious administration of

milk, eggs, farinaceous articles, meat broths, meat essences, etc., is always productive of good results." With all due respect for the distinguished author, I *must differ*. Here, again, let us interrogate nature more closely in regard to this diminution in the digestive and assimilative function—whether or not these changes are not also conservative.

It is granted that one of the principal dangers in typhoid fever is the poisoning of the system with the product of histolysis. Are we lessening this burden of the kidneys by adding to the ozonized waste? It is claimed that the hydrocarbons should be freely given to supply respiratory food and aid in the production of heat, and then alcohol is at once the most acceptable form in which to effect an entrance of hydrocarbonaceous food in the system. At the same time experiments prove alcohol to paralyze the ozonizing power of the blood corpuscles. The subject of lithæmia in fevers is certainly an important one, the study of which is calculated to greatly modify our idea of feeding. It is commonly stated that fat people have a more intense pyrexia than those who are wanting in adipose tissue, a statement which my observation in child fever has not confirmed. And if fat were an objection as supplying food for the fever, how can we reconcile this argument with the idea that we ought to feed hydrocarbons in fever?

In phthisis the blood corpuscles are cut down to suit the requirements of the lung in supply of oxygen, and any attempt to restate them by administration of iron while the capacity of the lung remains crippled is followed by increased irritation and injury. When in the aged the arteries become brittle by deposition of earthly material in their coats, do not we see, *pari passu*, with such change, fatty degeneration of the heart muscle? and is not this a wise provision of nature against rupture of such blood vessels? If we were to mistake nature's object in this compensation, retrograde though it be, and administer digitalis, would we not precipitate the danger? I must confess to a more

careful study into such provisions of nature the older I grow in medicine, and I heed them more.

In one accustomed to pay some respect to the appetite in fevers as a guide to feeding, I offer a limited quantity of milk, preferably buttermilk or skimmed milk, and if not willingly taken, wait. As to beef-tea, there is not a pound of nourishment in a ton of the stuff. Five grains of nitrate of ammonia in a tumbler of water discounts beef-tea.

The power of common salt in promoting cell activity and osmosis ought not to be lost sight of in long-continued fever or illness of any kind attended by wasting. I always feed salt in the milk or water in sufficient quantity to secure this result and prevent indigestion of the little food allowed. With children sick with typhoid I have found Mellin's an excellent food. I use it with milk and barley-water, and find that it is relished and digested.

QUIET.

It is estimated that life may be sustained independently of food and water for six or eight days—with water without food very much longer. If, however, muscular exertion be added, death will more rapidly ensue. Muscle glycogen is an important element, and in order to husband the forces reserved by the body for these emergencies, perfect rest must be enjoined. The wasting in typhoid is of muscular fibre, preserving the adipose tissue to a great extent uninjured. In consumption the reverse is the case, and the fats are absorbed. Sudden death from cardiac failure is the penalty of exercise or exertion, even when the patient is convalescent.

Finally, the selection of a good tonic for the convalescent stage of fever is often a matter of importance. Ordinarily the return to health after the fever poison has expended itself is rapid and permanent, and the emaciation of the body is rapidly made up to a point of plumpness exceeding that

from other illness. The return of appetite indicates that nature's best tonics will be borne, and air, exercise and diet begin to demand attention. In many cases, however, the appetite is capricious after the tongue has become clean, and there are other evidences of damage from the struggle. No tonic has accomplished so much at this time as the citrate of iron and ammonia given in infusion of columba.

Previous to its discussion a vote of thanks was extended by the Section to Dr. Larrabee for his valuable and timely paper, and it was referred to the Committee on Publication with the request that it be printed in *The Journal* at an early date.

Dr. Jenkins remarked that he was greatly interested in Dr. Larrabee's paper. There were two points upon which he wished to speak. *First*, as to the identity of infantile remittent and typhoid fevers: Twenty years' experience had led him to believe that remittent fever in the child, as in the adult, is frequently malarial. Children are more susceptible to malarial influence than adults, and often have remittent fever from a malarial influence only sufficient to cause intermittent fever in adults. He thought typhoid fever quite frequent in childhood and even in infancy, but entirely distinct in its etiology and different in its clinical history from remittent fever. Febrile movement is very readily induced in infancy from indigestible food, cold, etc., and is frequently remittent in character, but it is not of specific origin, and therefore neither malarial nor typhoid.

Second, He most heartily agreed with the paper as to the importance of restricted diet and abundance of water in the fevers of infancy and childhood. Infants with fever nurse more frequently, in consequence of thirst, and water, not food is demanded. The stomach is overloaded and fermentation induced, invariably increasing the febrile movement, and favoring the development of eclampsia, gastric catarrh, etc. A restricted diet is of special importance during

the first week of typhoid, while there is hyper- and infiltration of the Peyerian glands. Excessive feeding at this time increases the engorgement and causes a greater amount of necrosis. It is after the first ten to fourteen days, when the fever is partially free from the absorption of septic elements from ulcerating surfaces, that sustaining treatment by nutritious and easily digested food given at frequent intervals, together with stimulants and tonics, is of great value.

Dr. Johnson said typhoid fever does not always follow a prescribed course and is not always of a severe nature. He uses quinine early to aid in diagnosis, and then discontinued its use. He also substituted water for milk.

Dr. Lawrence wished to defend the young and inexperienced men in the profession from the damaging assertion that they stuff their patients with milk, beef-tea, gruel, etc., giving nature no time for that rest which she so much requires. Thinks the younger man less liable to guess his physiology and commit so great an error, than the one on whose head has fallen the snows of many winters. He then spoke of the superiority of cold as a therapeutic agent in the reduction of temperature. Did not advocate the symptomatic treatment of fevers. Uses arsenic in preference to quinine in malarial fevers of children, on account of its being well borne, of a pleasanter taste, and the certainty of its effect.

Dr. Boyce would add his testimony to the value of antipyrin in typhoid fever, also would corroborate the paper in its entirety. He too used quinine as a diagnostic agent.

Dr. Christopher said that the results of the recent investigations of the blood in malaria had proved that the diagnosis of this disease could now be made with ease and certainty by the microscope. Not so, however, in typhoid fever, since the cultivation of the bacillus of typhoid is so tedious and difficult. During the past fall and winter Cincinnati had been visited by an epidemic, three cases in children under two

years of age—eighteen, fourteen and nine months of age respectively. In all these the disease pursued a typical course of about two weeks' duration. The usual eruption was present and all had sordes on lips. The disease was modified according to the age of the child, the bronchial symptoms being more prominent, with corresponding involvement of the large intestine, so frequently seen in bronchial catarrh in young children.

ATELECTASIS.

Dr. Jos. O'Dwyer, says in the *New York Medical Journal*: In the treatment of atelectasis it is important to remember that the power to inflate the lungs in the majority of cases, is not used.

In young children this latest power can be called into play by exciting some of the forcible expiratory efforts—such as crying, coughing, or sneezing. Crying is particularly efficacious, because the approximation of the vocal cords, by obstructing expiration, condenses the air and at the same time prolongs the effort.

In older children and adults the same end can be attained by directing them to inspire deeply and then hold the breath, or practice forcible expiration with the mouth closed and the nostrils almost occluded.

A good example of the dilating effect of obstructed expiration is found in the extensive emphysema so rapidly developed in every attack of spasmodic asthma.

The inflation of a collapsed lung when removed from the body, unless of very recent origin, requires continuous pressure maintained for some time. A single puff accomplishes nothing. Prolonged pressure is necessary to overcome the adhesion of the opposing alveolar walls, as well as the natural contractility of the lung.

The act of coughing is performed in such a brief space of time that it does very little in the way of dilatation, except by the deep inspiration that precedes it.

Momentarily stopping the mouth and nose, as suggested by Dr. Jacobi, particularly if done at the end of inspiration, will naturally tend to drive the imprisoned air downward into the collapsed portions of lung during the struggles of the child and its forcible efforts to expire.

DIPHTHERIA.

BY

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Read to the Mississippi Valley Medical Association, at St. Louis, Mo., September 25, 1888.

Judging from the mass of literature extant, the subject of this paper seems to have been a very interesting one. Many books are now scattered broadcast over the world, and others,

no doubt, are in course of publication, speculating upon this much-dreaded disease, and almost as many theories are advanced as there are individuals who write on the subject. Some go back to ancient history, and tell us what Hippocrates said about a disease which, from its description, is thought to be the diphtheria of to-day. They quote from Hueter, Ortel, Nassiloff, Aretaeus and others; they review Verschows ideas on the subject; in fact they cull ideas and thoughts from nearly all the ancient and modern writers. Some attempt to prove that the diseases which have been termed scarlatina, putrid sore throat, black tongue, pharyngitis, cynanche trachealis and cynanche tonsillitis were identically the same disease now termed diphtheria. Some writers assert that it is a mere local attack upon the mucous membranes, air passages and other parts of the body where the cuticle is removed, and caused by contagion or infection. They endeavor to show that the disease is entirely caused by micrococci or bacteria, and this theory has been very popular. Others claim it to be a constitutional disease, caused by inhalations of malaria or noxious gases, as well as by bad diet and water.

Now, in pursuing this subject I will not undertake to go back into ancient history, nor even into the more modern history of the disease, preferring to work on a basis of my own, and to confine myself to facts derived from personal experience and investigation.

Whether the writers referred to, did actually describe in the diseases quoted by them, diphtheria, matters little; whether they were

right or wrong, whether they understood the disease or not, is of no consequence here.

One fact, however, is well known and can not be denied, and that is, that all the diseases the human family suffer from at the present time, have materially changed in type from the same diseases of many years ago. Every day habits and modes of living are changing. The people's surroundings undergo constant change. Not only do habits, dress, diet and occupations change, but the improvements in the construction of dwellings and furnishings of the same, have a tendency to bring about the very results we are now contending against. The drainage of our great cities and towns is not only imperfect, but radically and even criminally wrong and insufficient. The manner in which our sewers are constructed, allows the escape of gases along the streets, and under the present system of construction of our houses, with their stationary washstands, bath-tubs, water-closets, kitchens and sinks, their pipes having direct connection with the sewer pipes, owing to the trapping being insufficient and imperfect, there is a constant escape of gas from the sewers into the dwellings. In addition to this we have the prevailing custom of placing heavy carpets upon our floors, with paper or straw underneath, which is allowed to remain for six months at a time, to collect all the mould and other impurities that will naturally form in that time. The cushioned furniture, such as chairs, lounges, sofas, etc., which are seldom renovated, are also filled with it, thus holding in reserve large supplies of poisonous material to be floated about the room every time they are disturbed. The paper on our walls collects more or less of this mould or fungi; our beds, mattresses of hair or other material, absorb the poison, it being almost impossible to prevent it, and the occupants of these rooms inhale the poison every time they turn or disturb it. The popular habit of having large closets adjoining or opening into sleeping apartments for the purpose of depositing or stor-

ing clothing, worn or to be worn, are a source of poisonous exhalations.

In the country, years ago the farmers and inhabitants of the country towns were in the habit, in the fall of the year, of burying in the ground the winter's supply of vegetables, such as turnips, cabbage, beets, apples, potatoes, etc., which were only taken out as required for each day's consumption. Later, the practice of putting cellars under their houses was established. Many of the old dwelling houses that were constructed without cellars, had cellars added by digging the ground from under them, using planks for the side walls. Many of these had no other opening except through a trap-door from the inside of the house. These cellars each fall would be filled with vegetables and other materials for the winter's supply of food, either in bins or placed upon the ground. In the course of time fermentation would commence in these piles of vegetables, and as this proceeded, it generated the most poisonous gases, which escaped directly into the house, and which the inmates were obliged to inhale. Although the floors were made of boards ploughed and grooved, in the course of time there would be opening produced by natural shrinkage of the wood, which would permit a free escape of the gases into the room above. This method of storing vegetables having been established, diphtheria has become very prevalent in the country, while under the old plan of storage—outside, such a disease was almost unknown in the rural districts. In the old days carpets were not used. Saturday of each week was a general scrub day, and the daily mopping of floors was the practice. There was no paper on the walls to collect the poisons, a white-wash of lime on the ceilings and walls, and the methods of cleaning house kept the air pure and sweet, and there was nothing to produce malarial or fungal diseases.

My own experience with diphtheria has been somewhat an extensive one, and has proved to my entire satisfaction that it is a constitutional disease, caused by blood-poi-

soning. No other causes than those referred to, viz: impure air, improper food and bad water, have ever been demonstrated to me.

My attention was first called to the disease in a country practice at Early, Elk county, Pa. My knowledge of it at the time was derived only from what was published in the medical journals. On the first day of November, 1860, I was called to see my first case, a young man about nineteen years of age, who, upon examination, I found had false membranes or fungal growths quite extensive in character in his throat. My treatment was by local applications to the membranes of a solution of nitrate of silver; also a gargle and the internal use of chlorate of potash. This in a short time completely eradicated the false membrane, and my patient, showing no further signs of the disease was discharged on the 7th of November. Two days after I was again called, the messenger stating that the patient was not gaining strength, but, on the contrary was growing weaker. To this call I responded at once, and found the patient walking about the room. While I was warming myself at the fire, he stepped into the next room and lay down on the bed. After a little time I went into the room to see him, and was surprised to find the young man dead. This was a shock that I was little prepared for. Before I left I got permission to hold a *post mortem* examination the following day. The same day I was called to see another case about six miles distant. When I arrived, I found a case which they called croup with sore throat, but upon examination I found it to be a very severe case of a croupy form of diphtheria. For this case I immediately adopted a constitutional treatment, under which my patient soon recovered. The following is the treatment pursued:

Quinine in full doses every two or four hours, and a prescription as follows:

R. Chloride of sodium,
Chlorate of potassium,
Bi-carb. sodium, of each 2 dr.

Powd. Gum acacia, 1 dr.

Powd. Ipecac, 5 gr.

Aqua fontan, 8 oz.

F. solution, et. sig.

Give a teaspoonful every half hour to one hour

As a local application to the fungi or false membrane, I used compound tincture of iodine saturated with gum camphor, applied by means of a camel's hair brush; also gargles of borate of soda, chlorate of potash and chloride of sodium.

On the following day, as appointed, the *post mortem* examination was held in the case of the young man mentioned above, and found heart clot and the blood in a very bad and degenerate condition. I proceeded then to examine for a cause, and found the room full of noxious gas. In the room where the young man had slept, the floor was not covered by carpet, and owing to shrinkage of the boards there were many openings in the floor. This room was immediately above the cellar which had been made under that part of the house only, and I found that the gas came from the cellar. Upon examination the cellar was found to be filled with decaying and decayed vegetables, such as potatoes, apples, cabbages, turnips, etc. I ordered this place to be cleaned at once of all decayed matter, the floor above battened, the cellar to be white-washed with lime, and quick-lime to be thrown about promiscuously therein, as well as to be placed in boxes in every part of the house and to be allowed to air-slack, and thus purify the house. As a consequence, the balance of the family were exempt from the disease.

Between November 1, 1860 and February 15, 1861, I treated 489 cases of diphtheria and of this but five died. A full report of these cases with a record of treatment and results was made to the Cincinnati Medical and Surgical News, March 5, 1861, and published in Vol. II, No. 4, page 104, entitled "Diphtheria".

Most of these cases were of the most malignant type and the treatment used in all

of them, except the first above mentioned, was the constitutional treatment as described. In no case was mercury used in any form, neither would I allow, nor use drastic cathartics. The bowels should be kept very quiet and the strength of the patient in every way protected and vitality sustained. The patient should have a nourishing diet and in cases where there is much prostration, the entire body should be sponged with alcohol and water or bay-rum. I would say, that in every case a careful investigation was made to find the origin of the disease, and in no instance was there any doubt as to the fact, that it arose entirely from local causes. Nurses of the sick going from their houses, not similarly situated, whether nursing at night, or during the day, on returning to their families, did not in any single case carry the disease with them, nor were any families affected, unless a local cause could be found for it. Often while nurses were making applications to the membrane in the throats of patients, the latter would choke or cough and throw the membranes and corruption into the faces of the nurses in attendance, yet in no case did it communicate the disease. From that time to the present, these investigations and examinations have been carefully, thoroughly and continuously pursued.

In the winter of 1866, Dr. Hill asked me to go with him to see a case of diphtheria at the home of a farmer. The doctor stated he was troubled to find a cause, as there was not another case of diphtheria in the county; the farmer resided about half a mile from a public road; no member of the family had been from home, and no person had visited them at their house; hence there could be no exposure in contagion.

We arrived at the house about nine o'clock in the evening and found his patient, a little boy, dead. As we entered the house, I believed that I had discovered where the cause of the disease was located. The house was full of gas or sulphuretted hydrogen, caused by decaying vegetables. Of course I said

nothing to my friend at this time, but knowing the farmer right well, I opened a conversation with him by inquiring about the crops and all of which he said were extra good. I then asked him if he buried them "out of doors as usual?" when he answered that "he and his boys had dug a cellar under the house and had planked it up and that it was very nice and warm, and that all their vegetables had been put into this cellar." I then inquired how they got into this cellar, when he pointed to a trap-door in the same room and said, "we only have to raise that door and go down the ladder." Just at this time I heard his son cough, a lad aged about seventeen years, who sat leaning on the bed in the room. I called him to me and looked at his throat and found that it was gangrenous. I called the attention of the doctor to this and at the same time gave him the signal not to say anything. The father said, when I was looking at the boy's throat, "there is nothing the matter of George, he has only taken a cold." The young man then returned to his position at the bedside as before and I then asked the farmer to go with us into the cellar, to see how things were fixed up and to see his crops. We found at the foot of the ladder a barrel of garbage, which he explained to us was to feed the hogs. The cellar was packed with all sorts of vegetables in all stages of fermentation and decay. We could hardly endure the smell the short time we were there. There was no other door and the only ventilation was into the room above, through this trap door, and the crevices in the floor caused by shrinkage. While there I asked the farmer, who was a German Catholic, if his son George was confirmed, he replied that he was, "but why do you ask, he only has a cold." To this I replied that he must die, that he could not live longer than morning, that if he wanted a priest to send at once, also, to get immediately all the help he could and make a door through one side of the cellar for the escape of the poisonous gas or they would

all die. I also told him to send to the limekiln, about two miles away, and get good quick lime, to have all rotten and decaying vegetables picked out and taken away; to white-wash the planking in the cellar; to scatter lime over the floor to air slack; to pack the trap door; batten the floor above; white-wash the ceiling of the cellar, and to take all clothing from the rooms above, that was not in actual use. All these commands were obeyed and the work of renovation started. George died in a few hours. Some other members of the family had the disease in a mild form, but soon recovered and no other cases occurred at this house.

This investigation satisfied my friend, the doctor, and he never again asked or was troubled to find how his patients became exposed to the contagion of diphtheria.

I was called to Benezette by Dr. Hascum, in May, 1876, to consult and advise him in his course and treatment of diphtheria. On my arrival I found eighteen had died, and twenty-one were then sick. The treatment in use was mercury internally, and the local use of tincture of iron to the membrane. This treatment was at once discontinued, and the patients were at once put upon the following:

R. Chlorate of potassium,
Gum acacia.
Bi-carb. sodium, a a, 2 dr.
Chloride sodium, 1 dr.
Aq. f. nt. 8 oz.
F. solution, et sig.

Give from one teaspoonful to a tablespoonful every half hour to one hour. Quinine from 1 to 5 grains every two hours, the age to govern the size of the dose. Keeping the mouth wet with brandy or whisky and water in cases of general prostration. One part of the stimulant to four parts of water. Free sponging with salt water, if the surface is dry and hot; if not, free sponging with bay rum was ordered, locally touching the membrane with tincture of iodine, saturated with gum camphor, and a gargle of borate of soda, chlorate of potash, and chloride of sodium,

warm. The great mystery to be solved by the doctor and the citizens was, where the contagion came from, as there were no other cases of diphtheria in the surrounding country. No one had been away from the town, and no stranger had been known to visit the place during that spring. To settle all questions, after a preliminary inspection of the location, I called them to a mill-race, leading from a dam situated above the town, to a saw and flouring mill at the river below the village. This dam was used to hold water for the mills, and logs were floated down the stream from above, and held in the dam to be passed out in the race, as required for the saw mill. The mills required repairs, and the water had been shut off and the race was now empty. The race was close to, and parallel with the entire line of Main Street, in the bed of which was found all sorts of rotten wood, dead animals, in fact, all kinds of filth and vegetable matter in an advanced stage of decomposition. The air was filled with noxious odors, which were almost intolerable. On their attention being called to this condition of things, all questions as to the cause of the contagion were considered settled. This mass of filth was at once directed to be raked up and burned, the bed of the race to be strewn with lime, the fences and all out-buildings that could be, whitewashed and quick-lime placed in the rooms of each house, and allowed to air-slack.

The result was: one of the twenty-one patients sick, died; one other case was developed about this time, which with all the others recovered. Of a total of forty-one cases, nineteen died and twenty-two recovered.

Such illustrations might be multiplied, but I will not take time for more than two.

The village of C., about sixteen miles from the town just spoken of, was found to be in a similar condition. There was but one street in the village, and open ditches, which were used as sewers, ran along each side of this street, between the road and the

houses. These ditches, in addition to the water from heavy rains and sewerage, which was discharged into them, were filled with an accumulation of all sorts of debris, old boots, shoes, all sorts of decaying vegetation and materials. The side-walks were made of boards, which had been renewed from time to time by placing new boards on top of the old ones, the stringers beneath, as well as the old boards, and some of the upper ones, were a mass of rottenness, covered with mould and fungi. Upon cleaning the ditches, removing the decayed side-walks, tearing everything up, burning all filth, and observing the directions for the scattering of lime in the ditches, on the ground and about the dwellings, in fact following the same general directions that had been given as to the town above mentioned, including the constitutional treatment, the recovery of all the patients followed.

On March 19, 1885, I was called to see a little girl between four and five years of age. On arriving at the house, I found a meeting of the Ladies' Society of the Church was being held there, and some of the ladies present had their children with them. The little patient was lying on a lounge in the large sitting room, and some of the children had been trying to amuse her during the afternoon. Upon examination I found her throat and neck much swollen, and the tonsils, soft palate, and fauces covered with fungi or membrane. To prevent a sensation, the child was removed to another room, without stating what the nature of the disease was. The membranes were then brushed over with compound tincture of iodine, saturated with gum camphor, and the gargle of borate of soda, chlorate of potash, and chloride of sodium, before mentioned, ordered; the prescription of chlorate of potash, chloride of sodium, bi-carb. soda, etc., previously referred to, a tablespoonful of which was given every hour, also one grain of quinine every two hours. The entire body was freely sponged with the saline

solution the first day, and then changed to bay rum. Under this treatment the patient rapidly recovered. No one that had been around her in the sitting room at the time of my arrival had any symptoms of the disease, nor did any of those who nursed her. Two other children of the same household, a girl of six and a boy of three, were taken with the same disease, and quite severely, showing a croupy form. Upon being removed to another part of the house, and subjected to similar treatment, they soon recovered also. One of them had a slight eruption.

On April 7th, a man who occupied a room on the opposite side of the hall from that occupied by the children, was also taken sick with diphtheria. He was removed to another part of the house, and treated as were the others, only in proportional doses, and soon recovered. About the last of April, this man's wife was very severely attacked with the same disease, with the addition of an eruption from head to foot. Taking the same course of treatment as with the others, she was soon better, but was prostrated with the sequelae of diphtheritic paralysis of the inferior extremities, but by the free use of iron, quinine, and strychnine, was soon entirely well again.

The mother of the children was the last to be affected and was treated the same as the rest with the same result. I had instituted an investigation of the rooms of these patients while the first patients were sick, their rooms as stated being on opposite sides of a hall, which led from another large room, in which a coal stove was used to warm these three rooms, the doors being left open for that purpose between them, but nothing could be found to satisfactorily account for this terrible disease. No cases existed at the time in town, which is well and healthily located and with plenty of pure water. The house was clean; all clothing not in use removed from the rooms; quicklime had been placed in each room to air slack, every means was used to cleanse and

purify the atmosphere, and not another case appeared in the house except those mentioned, although six others occupied other portions of the house and nursed the sick, while daily, ladies and children of other families called to see them, yet not another case was developed in the neighborhood. When the adult members above stated were taken sick, I resolved to make a more thorough investigation for a first cause, and with this in view, I examined two stationary wash-stands, which I had sealed up the first day, one placed at the corner of the large room mentioned above, the other directly opposite this on the other side of the partition within one of the sleeping rooms, the one occupied by the mother and three children.

The waste pipe from the first-mentioned room seemed to be all right, but upon opening up the pipe in the sleeping room, at the top bend of the trap and in a direct line with the sewer pipe, was a small hole about three-eighths of an inch in diameter, which had been made by a plumber, who was at one time called in to clean the trap, and who after getting through with his work had plugged this hole with a cork, which had been blown out by the force of the pent-up gas. We again plugged this hole and ordered that a plumber be called and arrangements be made for sanitary plumbing, ventilation, etc. These pipes led to a first-class private sewer, used only for this house, and which led to a stream some distance from the premises. The sewer drained three wash-basins, two water closets, a bathroom, two kitchen sinks and a cellar sink.

Everybody being well once more and while the plumber was preparing plans for the improvement of the system of plumbing the house, two of the children that had been ill, were again attacked and showed precisely the same symptoms as in the first call and very severely. On an examination of the pipes it was found, that the temporary pine plug, which had been placed in the pipe as above stated, had been blown out

again and that a constant stream of gas was coming into the room, poisoning the atmosphere. We had the plug replaced at once and sent for a tinsmith near at hand and had it soldered up. In a short time the children were well again, and since that time there has not been a case in this house.

The only persons that were sick, were those who came in contact with the foul gas as it issued from the sewer pipe, the prime cause of these cases.

Therefore the conclusion is, that if our authorities, our physicians and our Board of Health, would make a specialty of removing nuisances from our streets, houses and surroundings and pay less attention to the question of contagion, we will hear less of diphtheria.

Often when a case of diphtheria is found to exist in a family, that family is prohibited from going out and the entire family remains indoors, deprived of fresh air and sunlight. The neighbors are prohibited from visiting them on account of this contagion scare, while if they were allowed to keep in the open air, to have better ventilation in their houses and were directed to purify their rooms and to remove the cause of disease by preventing the generation of gases in the house, we would have very little trouble from diphtheria.

Nearly all of our cellars are damp. On visiting a case of diphtheria we should at once examine the house from garret to cellar. In most cases we find the walls, floors, above and beneath, more or less covered and spotted with a whitish mould caused by dampness. A ventilator should be placed in every house from the cellar to the top of the roof, and a ventilating pipe should extend from the trap of water closets, sink, bath-rooms and stationary wash-stands, above the roof of the house.

All wood and old boxes should be removed and lime freely used in all parts of the house, and all parts where the surface will permit whitewashed.

In the purification of houses, the writer

prefers to use quick-lime, allowing it to air-slack. Sulphate of iron should be thrown into the sewers and waste pipes and all doors leading to closets from sleeping rooms should be closed with rubber packing, to prevent the escape of gas into the rooms. Chloride of lime, which is often used, is very good but is not equal to quick-lime and is objectionable on account of its offensive odor. The use of carbolic acid was not found to be of any advantage by the writer.

The proper selection of food and drink cannot be too carefully and thoroughly impressed upon every family. Much of the fruit and vegetables used is covered with fungi, and decayed places.

Nearly every day we find sensational articles in our daily papers, and I am sorry to say, in our medical journals also. These articles are calculated to cause uneasiness and excitement, and the cry of infection-contagion, and frequently is the cause of neglect of families and patients where the disease is pronounced diphtheria. I will only refer to one article. The following was found in many of our medical journals and daily papers:

TERRIBLE VIR- ULENCE OF DIPHTHERIA.	Dr. C. N. Vail, of Negley, after a recent post mortum on a case of diphtheria, took a portion of the diseased membrane of the throat to his home for microscopic investi- gation. His research was conducted with the utmost carelessness, even some of his children being allowed to view the germ through the microscope. Two died, and the doctor himself succumbed to the dis- ease, while five remaining children are at the point of death.
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For the purpose of obtaining the facts and a full report of the cases referred to in the above article, I directed a letter to a gentleman in Negley and asked him for a full and careful report of facts as to these cases, and also as to the internal and external condition of the house, cellar, water

supply, situation of out-houses, etc. I received the following reply: "The house stands on high ground on posts, instead of stone wall, and the cellar is planked up and not walled in with stone and has a gravel floor. Access to the cellar is directly from the inside of the house. There are no wash-stands, bath tubs, kitchen or other sinks. Water is obtained from a dug well situated twelve and a half feet from the kitchen door in the direction of the stable is dug to a considerable depth and then bored for some distance below that, it is walled from where they commenced to bore to within a short distance of the top of the well; the curb is much lower than the surroundings. The stable is sixty feet from the kitchen door or forty-eight feet from the well and the privy is between the well and stable, with pig sty and hen house in the same neighborhood. The inner surroundings have usually been clean and neat, but Mrs. Vail had not been at home for some weeks prior to the attack and the house-keeping was done by the daughters, the oldest of whom is about fifteen or sixteen years of age and the probabilities are that things were not kept in the usual good order.

After the disease had well set in, the condition of the house inside was found to be very bad and was not attended to by the neighbors, nor by any one until the whole family became afflicted when the township trustees took them in charge, and upon the advice of the attending physician that they would all die if not removed, they were taken to a vacant hall and what then remained of them recovered.

I have often taken the membrane to my office and house to experiment upon and at this time have a large powder box full of membrane, in my office, which is examined daily by those calling for that purpose.

We can not expect healthy blood without healthy food, pure water and pure air. The inhalation of sulphide of ammonia and sulphuretted hydrogen that is so freely thrown into our streets and houses, from decaying matter and sewers, is destroying the health of the human family and some provisions must be devised to save them from it. All of which is respectfully submitted.

GENERAL SURGERY.

MACEWEN'S
OPERATION
FOR HERNIA.
REAMPUTA-
TION OF
THE LEG.
CANCER OF
THE LIP.

A Clinical Lecture delivered
at the New York Post-
Graduate Medical School,

BY

ROBERT T. MORRIS,

M. D.

Reported for PROGRESS by
J. A. Nichols, M. D.

GENTLEMEN: This first patient, you will all remember, as the young man upon whom I operated three weeks ago for the radical cure of hernia. As the patient stands upon the table the scar line is now easily seen, but in a few weeks it will fade away, and at the end of a year will be visible on close inspection only. This pretty scar is the result of our antiseptic

method of work. I do not believe that the plan of allowing the wound to heal by granulation, where the ring was not large, possesses any advantage whatsoever, and there is no question as to its disadvantages.*

If the old pouch of peritoneum makes its way into the inguinal canal at all after the wound has healed, it is going right on through in spite of any sort of scar or bar, and in the language of our school days, it will flow in a southerly direction and empty into the scrotum with the persistency of the flow of the Mississippi River into the Gulf of Mexico. Our efforts then are directed toward an operation which will not only narrow the inguinal canal but which will do away with the pouch of peritoneum. In this case I folded up the large sac, as you remember, as one would roll up a window curtain, and then introduced catgut sutures in such a way as to hold the roll in this shape and make a bar of it, which bar was placed transversely across the region of the inner ring before the canal was sutured together. This is MacEwen's operation. Dr. McBurney cuts off the pouch of perito-

* The author would not give the inference that McBurney's complete operation is not a very valuable one for certain groups of cases.

neum altogether, after ligating the neck of the sac. I have done both operations several times and do not know which one to prefer, as there have been no failures with either as yet among my cases. It seems as though a very large sac might slough after MacEwen's operation; but one seldom sees a larger sac than the one I folded up for Mrs. E. before the class a couple of months ago, and the patient could hardly be induced to stay in bed after the following day. So her big sac evidently behaved properly.

The youth who stands before you is a monorchid, and the hernia occupied the side of the scrotum from which the testicle was absent. In these cases of undescended testicle it is a common thing for patients to go without a truss for the hernia, under the supposition that a truss would prevent the testicle from coming down. The gubernaculum testis should have steered the testicle into the scrotum by the eighth month of foetal life, and after a child is born, if a testicle is undescended and the child has hernia on that side, it is best to attend to the latter and to pay no attention to the former. A testicle which remains in the abdominal cavity is useless. It may be perfect in shape, but it does not furnish spermatozoa. A late descending testicle is sometimes useful, but is usually, I believe, of no importance. One testicle is enough, even if the man's wife feels the need of a large family of children. In the case of this youth the inguinal canal was closed completely, because it was not necessary to leave any room for the passage of the elements of the spermatic cord, and his chances for a permanent cure are thereby increased—if they needed to be. The patient was kept in bed for fifteen days, and the antiseptic dressing was removed for the first time at the end of fourteen days. At this time primary union was complete and the catgut sutures of the skin were absorbed. I used as usual ordinary Kocher's catgut for the peritoneum and for the skin, and chromic gut for bringing

the margins of the ring together. The reason why chromic gut is better for this purpose is because it is not absorbed until after the end of the second week, while the catgut, not prepared with chromic acid, disappears in eight or ten days, usually. After an operation for the radical cure of hernia the patient should be kept in bed for three weeks, if possible. No pad should be applied to prevent recurrence of the hernia. If a pad is required the operation was useless, and if the operation was useful the pad is not required. It would be injurious if applied after a good operation, by causing some absorption by pressure, of new plastic tissue.

Just a word more on the subject before passing to the next case. When called upon to operate for the relief of a strangulated hernia, do not try to reduce it by taxis. There is danger of strangulation at the neck of the sac in a certain proportion of cases and a neat antiseptic operation offers the patient almost certain hope of a speedy recovery. Do not fail to make an attempt to radically cure the hernia at the time of operation. It is customary for surgeons to be so pleased at making a good reduction of a strangulated hernia that they forget to do justice to themselves and to the patient by completing the work in such a way as to make a radical cure. I do not know why this is so, but I guess likely it is due to that absurd mental feature known as human nature.

This next patient had his foot and ankle amputated by a mowing machine fifteen years ago, when he was about ten years of age. Mowing machines do not close wounds neatly, but leave them open to heal by granulation. The scar that resulted was tender and it was firmly attached to the ends of the tibia and fibula. Two weeks ago I tried to improve upon the mowing machine style of wound treatment by re-amputating above the old scar and closing the wound. The dressing will now be removed. The strip of adhesive plaster that

was bandaged to the dressing and to the skin for a few inches above has prevented the dressing from slipping away from the end of the stump, and the trick is worth remembering, especially in a case like this one, where the patient was not kept in bed, but was allowed to go about on crutches.

On removing the bichloride cotton dressing the strip of Lister oiled silk protective, that I always place next the wound, comes away too. The whole dressing is perfectly sweet and it contains no pus. The wound has healed by primary union, and as I lift up the catgut knots it is observed that they only lie loosely upon the surface, the portion beneath the skin having been completely absorbed.

The scar is perfectly soft and free, and when the false leg is applied, the scar region will be as free from irritation as any other portion of the skin of the stump. It is sometimes said that a tender stump can not be avoided in old people, but one patient who was nearly eighty-four years of age when I amputated at the junction of the lower and middle thirds of the leg for gangrene, has been going about for three years with a false leg and a cane, and has had no trouble with the scar. In fact the scar line is hard to distinguish, as primary union was obtained and the parts appeared almost in a normal condition of health when the dressing was removed.

The third case this morning is one of cancer of the lip. Dr. Nichols now everts the lip and makes compression near the angles in order to cut off circulation. A few minims of cocaine solution are injected hypodermically into the bloodless region and the operation will be painless. The cancerous portion is now removed and hemorrhage is controlled by the cat gut sutures that are used for closing the gap. This wound can not be covered by a bulky antiseptic dressing, so we simply sprinkle iodoform along the wound line. When any part of the iodoform clot is broken off a little more of the powder is dusted on. Iodoform is one of the most useful antiseptics in the list, in spite of the fact that a commission every now and then reports upon its uselessness. Those of us who do practical work know more about it.

AMPUTATION OF THE LEG AND THIGH.

BY

MORDECAI PRICE,

M. D.

Read to the Philadelphia
County Medical Society
Stated Meeting, January
23, 1889.

The subject I wish to bring before the Society is one of deep interest—to me at least, and to all others who are alike unfortunate in having lost a limb. In performing amputation on the leg, the chief object of the surgeon of the day seems to

be to remove the limb and save life—the future comfort and usefulness of the patient being minor considerations. The comfort and usefulness of patients who are subjected to amputation of the leg have received my personal attention through the entire period of my professional life. This has been my latest thought at night; my first consideration in the morning; and I have been painfully reminded many times during the day of the importance of changes in the present surgical practice. I see no reason why in this department we should narrow our surgery to a strict following of the *dictum* of a school of surgeons a century old; why we should not, in step with other departments of surgery and medicine, adopt those new truths which our advanced art and science and wider experience approve.

I ask your critical consideration of the few changes I propose to suggest. As a student I often marvelled at the numerous amputations done near the ankle and through the knee, for the reason then given: to save all the limb possible, apparently without due consideration of the discomfort and suffering to follow and the usefulness of the limb. I have waited for years hoping that some of our eminent surgeons, members of this Society, would bring the subject before us, when I expected to be able to say something upon the subject. Like many other departments of medicine and surgery, however, this seems to have been looked upon as one of the subjects forever

settled. For as far back as the works of surgery of the eighteenth century I find the same old plates, the same old positions for removal of the limb—where it is a matter of selection with the surgeon—as I find in use to-day. Sometimes the accident comes to the patient's rescue and removes sufficient of the limb to compel the surgeon to give the patient a good stump. In an amputation to-day in the foremost hospital of the world—the Pennsylvania—if the location of the injury left a choice as to where the limb should be removed, it would be done through the ankle or at the lower third of the leg. I suppose you ask "Why not?" I would answer that question by asking the question: Why do we amputate at all? The answer would be: first, to save life; and, second, to make a useful limb. Now, we can save life as easily by one method as by the other. Why not then operate solely for the best interest of the patient? In an amputation of the leg all that is left below the middle of the middle third of the leg is useless and in the way, and gives that much more room for ulceration and friction sores. Let me tell you, gentlemen, these are weighty considerations in an amputation, for they compel the wearer of an artificial limb either to endure great suffering or to leave the artificial limb off, as I can abundantly testify from personal experience. Nearly three quarters of a century ago, Gibson used the following language: "As much as possible of the thigh should in all cases be saved. But the rule does not always hold good in amputations of the leg. If, for example, the leg be amputated just above the ankle, the bone, from the deficiency of surrounding muscle, can not be well covered, and is therefore not calculated to bear the pressure of an artificial leg. On this account the patient is obliged to have an instrument of the kind adapted to the knee, and the leg, therefore, is carried out behind at right angles with the thigh and by its weight greatly incommodes the patient, so much so, indeed, that I have

known two or three to submit to a second operation, for no other reason than to get rid of the incumbrance." This Dr. Gibson gives as his professional experience. I personally know of a number of reamputations for no other reason than the suffering, discomfort, or absolute impossibility of wearing an artificial limb upon a long stump. After the application of an artificial limb there is a constant diminution of the stump. Its nutrition being continually interfered with, and the parts being of low vitality, consequently, when we have ulceration or friction sores or injuries of any kind, it is with great difficulty they are induced to heal.

There is another element to be taken into consideration. As soon as the artificial limb is left off, and the patient assumes an upright position, the limb is greatly enlarged by a species of œdema which takes place immediately, leaving the parts in no condition to heal. The limb has the feeling of being cold and almost lifeless, and if exposed to cold it would be the first to freeze. It is almost impossible to keep the amputated limb warm.

When the artificial one is left off, amputations through the knee joint give in many cases a very bad surface to bear the weight of the body, and a leg is rarely worn with comfort. Such an amputation absolutely prevents the application of a full-lengthed limb, as the knee-joint would have to be lowered some three inches for want of room, making at best a useless appliance. Amputate therefore—if it is a matter of selection—through the lower third of the thigh. An amputation below the middle of the leg is objectionable on account of the length of the stump, which presents occasion for ulceration and is difficult to dress properly so that the limb may be worn with comfort. Every inch of stump over five or six inches below the knee involves that many hundreds of hours of suffering and distress to the patient. The additional chance of life does not add one feather's weight in favor of the long

amputation. Amputation at the lower third does not give sufficient room for a strong ankle-joint, and, therefore, adds greatly to the wear and tear of the limb, thus adding largely to the expense. Amputations through the ankle may give the patient something to walk on, but this is oftentimes accompanied with great pain. It often gives him a poor excuse for a limb, and completely prevents any mechanical appliance from aiding him in the least, and forever prevents him from hiding his terrible deformity. If ever there was an appliance to which the term "slip-shod" could be appropriately applied, it is to those intended to imitate nature in these cases. The usefulness of an artificial limb is in proportion to the simplicity and completeness of its mechanical construction. The nearer it resembles the human limb in all its parts, the more perfectly it fills its office. There is one fact associated with these cases to which but few of you, perhaps, have given a thought: that is the ever present and painful consciousness of physical deformity which the patient has, and the fact that his maimed condition closes to him many avenues of honorable, useful, and lucrative employment. This applies especially to the case of civilians; to the soldier it is different; to him the loss of part of a limb is unchallenged testimony of gallant and heroic sacrifice.

DISCUSSION.

Dr. L. K. Baldwin: I have been much interested in the remarks of Dr. Price, partly because a gentleman called at my office this afternoon and asked me to look at an abrasion on the stump of an amputated limb. The amputation had been performed at the junction of the middle and lower third. It was just such a stump as I thought that he ought not to have had. The operation was performed ten or twelve years ago, and although he has worn a number of legs the stump is always getting rubbed. The remarks of Dr. Price in regard to amputations

near the joint are very good. There is no one more capable of speaking upon this subject than Dr. Price himself, for there is nothing like practical experience. His remarks are worthy of all consideration, and it would be well if they were followed out.

Dr. James Collins: I have listened with a great deal of earnestness to the remarks of Dr. Price on this question. He comes rich in that experience of suffering that makes men wise. I therefore attach great weight to his words. I could, however, but think that while the doctor is entirely right in his opinions, he may have forgotten the lectures given at the time he graduated. I have heard the professor of surgery say, and have seen him demonstrate, that the point of election for amputation of the leg was three finger's space below the tubercle of the tibia. I think it well to mention this, and while I admit the great advances which have been made in surgery, yet, I think, that we should not cut entirely loose from all that has been done in the past. With reference to what has been said in regard to long stumps, I think that the surgeons of twenty years ago were deluded by the promises of the artificial limb makers. The artificial limb makers made demonstrations before classes in surgery, and led the surgeons to believe that if they had a certain form of stump they could apply the limbs better. They described their wonderful limbs that could almost walk without a man attached to them, and thus to a certain extent deceived the surgeon.

Dr. O. H. Allis: I would ask Dr. Price if in a case of injury to the foot, he would take off the limb say at the tarso-metatarsal joint, or to go to the point of election below the knee?

Dr. M. Price: I should prefer to operate at the point of election. I think that even in an injury which would require amputation of the great toe, the patient would be more comfortable and walk better if the limb were taken off below the knee, although I do not say that I should do it.

Dr. H. K. Wharton: I agree very thoroughly with Dr. Price as to the necessity of securing a good stump, and as to the point of election in amputations through the leg. I have for some time made it a rule not to make any amputation near the ankle-joint, preferring to go some distance above, if I have to go above the ankle.

I, however, disagree with him in regard to the discomfort which a patient suffers with a Syme or a Pirogoff amputation. I have seen such cases get along very well and walk with comfort. I also disagree with Dr. Price in regard to knee-joint amputations. I, of course refer to amputation through the joint, the condyles being saved and the patella being left. I have seen these patients apparently walk with comfort, and have a good stump. Where the amputation is one at the knee-joint, a portion of the condyles being sawed off and the patella removed, a square stump is secured which can be well covered. I have seen a number of cases of this operation, and in these the patients had good stumps.

I think that the main element of a good stump is a movable covering, the skin being perfectly movable over the bone. If the skin is bound down and is subjected to pressure, the patient will suffer from constant irritation, and will be apt to exhibit some of the forms of mechanical ulceration seen in stumps.

I agree in regard to the uselessness of trying to save too much time in amputations.

Dr. John B. Deaver: In the large number of amputations I do in the hospitals of Philadelphia, I never do a Syme, but I do a Pirogoff and a Chopart. We often have to be governed by the wishes of the patient. I have had cases where I advised an amputation of the leg in order to render the use of an artificial limb easier, but where the patient has insisted that as much as possible of the limb should be saved. A Pirogoff does well. It answers better for a working man than for one under better circumstances. A teoplastic resection of the

foot gives the patient an almost useless limb. Yet it is a very nice and very difficult operation. It has been performed only twice in this city, once by Dr. Hopkins, and once by Dr. F. H. Gross, at the German Hospital. The patient of Dr. Gross is still in the hospital. He is able to get around, but I do not think that he will be able to do hard work.

In amputations through the knee-joint I think that it is important to leave the patella, which serves partly to carry out the theory of Dr. Price of leaving a plane surface. When the patella is removed there are left two irregularities caused by the condyles. We must here be careful not to divide the ligamentum mucosa. If that is divided the action of the quadriceps causes retraction of the patella. I have, however, seen retraction in cases where attention was paid to this point. In such cases it would be better to do the amputation at the knee. This, of course, opens up the medulla, and exposes the patient to the dangers of septicæmia, but with antiseptic surgery I think that the risk would not be increased.

Dr. J. Price: Attention has been called to the locomotion of persons wearing artificial limbs. Dr. Price has not said very much about his own locomotion. He is very fond of using the gun, and I have often hunted with him from morning until evening, and can speak of the tolerance of a good stump and a good artificial limb. In his own case he has wonderful tolerance for prolonged walking and climbing.

I have watched many cases of amputation where the operation was performed years ago. One case, operated on by Dr. John Mitchell, I see sometimes with one crutch and sometimes with a crutch and a cane. In none of these cases is the locomotion good. The amputations were made at the points criticized this evening.

Dr. A. Hewson, Jr.: The only point which I have to offer is in regard to Pirogoff amputations. It has been suggested that no artificial appliance could be em-

ployed in these cases that would look well. In several of these operations, done by my father, I have seen a shoe so well applied to the stump that it was almost impossible to tell that the man had an artificial foot. The difficulty was overcome by a large spring being put in the place occupied by the ball of the foot, *i. e.*, extending from the heel toward the toe, so that when the heel was put to the ground there was not that sagging in of the shoe as occurs when simply a filled shoe is worn.

Dr. O. H. Allis: My own feeling is that where amputation is very low down near the ankle-joint, the limb is used almost as a crutch, whereas if the amputation is a little below the knee, the instrument maker can make so good an ankle-joint that the wearer can walk on any declivity almost as well as with the natural limb. When you try to piece out an ankle, the part can not be used as a foot, but is more like a crutch.

Dr. Frank Woodbury: I should like to say a word in regard to a class of cases to which reference has not yet been made, that is, to amputation for disease, and particularly tuberculous disease of the joints. I would refer to a series of observations made by Ogille, in which it is stated that the prognosis of tuberculosis of the lungs is improved by an amputation, and that the larger the portion of the body removed, the better chance there is for the recovery of the patient. It seems that in certain cases of phthisis the nutritive powers are not sufficient to maintain the nutrition of the entire body, so if we can remove say one-eighth, or a larger portion of the body, the digestive function and the blood-making function are more than sufficient for the remainder of the body, and the nutrition is therefore improved.

This is directly to the point of operating in cases of joint tuberculosis, and also in the direction of the paper that we should not endeavor to save all the tissue that is available.

Dr. M. Price: I agree with the statement

of Dr. Allis that such appliances are just like crutches. A man with a well-made foot can readily go up stairs, giving a little spring with the sound foot. I was able to play base-ball, foot-ball, and the like, and was at school a long time before it was known that I had an artificial limb by any one with the exception of my room-mate.

In regard to Dr. Collins's statement as to the teaching when I was a student, Dr. Smith, who was at that time professor of surgery, was one of the most conservative of men. His statement was that we have to consider what we are doing in amputating, and consider the influence upon the man himself. As many of these patients are led into bad habits of dissipation by being invited to drink by every one they meet, it might, in these cases, be better to amputate around the throat. I am not surprised that Dr. Collins has called attention to the fact that Dr. Smith amputated three finger's breadth below the tubercle of the tibia. Dr. Smith had been in the war, and had seen much to show him the usefulness of a proper length stump.

If I were going to amputate near the knee, I would operate below the joint, giving the patient a knee-bearing leg, with the patella and all its attachments in place. As soon as you amputate the leg, retraction takes place. It is one of the secrets of treating a man with amputation to keep the stump straight. If the limb is left lying loosely on a pillow, there will be retraction of the muscles. Now and then I have to wear a peg, and it is then two or three days, before I can straighten the leg. I would not suggest an amputation that opens the knee-joint. Where the operation suggested can not be done I would amputate at the junction of the lower and middle third of the thigh, and thus the knee-joint could be brought in the proper position.

In the case of workingmen who have passed that period in life when there is no chance of advancement, I have no objection to a Chopart, or any other amputation

that will give the man a limb that he can walk upon. I am speaking of amputations that will give the man the same appearance that he originally had. I think we err in discussing the question of what ought or ought not to be done with the patient. We are there as his adviser, and it is our business to do the best for the patient. I say to him such and such should be done. If he says that he will not have it, I decline to treat him.

GASTROSTOMY FOR CANCER OF THE ÆSOPHAGUS.

Dr. Lewis A. Stimson at a meeting of the New York Surgical Society, January 9, 1889, showed a specimen, the stomach

and œsophagus of a man upon whom last November he had done a gastrostomy for cancer of the lower end of the œsophagus and the adjoining portion of the stomach. At the time of the operation the patient had been so reduced by starvation that it was not thought possible that he could survive more than two or three days. The operation was done in two stages, the opening into the stomach being made twenty hours after the latter had been fixed to the edges of the incision in the abdominal wall. Through this opening the patient had been fed, first with milk and subsequently with solid food, and had survived the operation about five weeks, dying of the progress of his disease. About three weeks after the operation the œsophagus had again become pervious to liquids. The specimen showed the stomach firmly fixed in the abdominal wound and the opening healed all around.

In a second operation the stomach had been opened three days after its fixation in the abdominal wall, and, although the patient had died three days afterward from rupture of the œsophageal cancer into the trachea, the opening into the peritoneal cavity had been found to be solidly closed by adhesion between the opposing surfaces. He thought it was important to seek for early union of the cutaneous incision about the gastric fistula, and to drain the parietal wound only by its upper and lower ends, in order to avoid interference with primary union by leakage of the contents of the stomach.

DIABETIC GANGRENE.

Discussion of the paper of
DR. WM. HUNT.

Read to the Philadelphia
County Medical Society.

*Continued from February
Progress page 355.*

Dr. Thomas G. Morton, in opening the discussion, by invitation of the Directors, said: Thirteen cases of diabetic gangrene have come under my observation, generally

in consultation. In all instances the disease involved some part of the lower extremity, generally originating in one or more of the toes, or about the dorsum of the foot. Many years ago I witnessed a needle operation for cataract in a young girl, who was known to be markedly diabetic; sloughing and gangrene of the orbital contents resulted, and death by coma occurred on the third day.

With some few exceptions, the patients I have seen with gangrene in the course of diabetes, have been in good circumstances. I refer to this because it has been suggested that this disease more frequently occurs among those who are surrounded by the comforts and luxuries of life, and not among the poor.

An inquiry recently made of the superintendents of our State hospitals for the insane shows that although more than twenty thousand patients belonging to the indigent class have been under the care of the present medical officers of the hospitals, there has not, it seems, been a single case of diabetic gangrene in the institutions at Harrisburg, Dixmont, Danville, Norristown, or Warren.

Gangrene in diabetes, in the cases I have seen, has generally started in a local inflammation, resulting from some very trivial cause; on several occasions I have known it to follow the operation of cutting a corn. The occurrence of gangrene in diabetes seems to be a certain indication of great nervous exhaustion, and of general condition most critical. Although I have observed gangrene as a result of diabetic condition in parts of the body other than the

extremities, notably in diabetic carbuncular disease, yet gangrene appears more often in the toes and feet, where there is but a moderate amount of cellular tissue, and where the circulation in such cases is apt to feeble.

The surgical treatment of this form of gangrene can generally be but palliative, most oft the cases I have seen have been promptly fatal. The ordinary principles of surgical treatment should be observed; all tension of parts ought to be relieved by deep, free incisions, which, by relaxing and draining the tissues, permit a better circulation; indeed, I have often arrested the rapid march of gangrene by such treatment. When a line of demarcation forms, which may occasionally happen, the question of amputation may arise. Occasionally the gangrene of diabetes is associated with most excruciating pain, not only in the affected limb, but apparently in the gangrenous parts. I have had two such cases, both females, and in each I performed nerve section, with partial relief in one, and with complete success in the other. In the first, I sectioned the posterior tibial, in the other the sciatic. The latter case I saw in consultation with the late Dr. L. M. Service, of Belmont, near the Falls of Schhkill; the patient was seventy years of age, a large portion of the foot was already gangrenous, the pain in the foot and leg as far as the knee was excessive. I sectioned the sciatic in the middle of the thigh; the gangrene, which was not apparently hastened or influenced by the operation, very slowly extended for some weeks, until a point about four inches above the ankle was reached, where a line of demarcation formed. Subsequently, Dr. Service, Jr., removed all the gangrenous parts without encroaching upon the living tissues. The patient improved, was able to move about her room with comfort, and with entire freedom from pain; eight months afterward she died from an attack of acute dysentery.

Dr. John Ashhurst, Jr.: In justice to the

writers of text-books it should be said that an index does not always represent all that is in the book. In my own smaller work I have alluded to diabetes as among the causes predisposing to carbunculous affections, and in the *International Encyclopædia*, in the article by Prof. Verneuil upon the "Reciprocal Effects of Constitutional Conditions and Injuries," Dr. Hunt will find a much more elaborate study of the relations of diabetes to gangrene than in the comparatively short article of Prof. Moore. Of course, we have been familiar for years with the tendency of diabetics to suffer from gangrenous affections, such as carbuncle and, though not so characteristic, furuncle; and we have also known that intra-cranial injuries may give rise to diabetes, or rather to glycosuria. Verneuil considers the question of sugar in the urine from irritation of the floor of the fourth ventricle, and shows that it may be a temporary condition, the sugar disappearing as recovery from the injury takes place, and without leaving permanent results.

In many cases of diabetic gangrene, as Dr. Hunt points out, the quantity of sugar in the urine at different periods varies; it may, in fact, be absent at times, and thus even careful examination of the urine during such intervals may fail to reveal the condition. I have but one recorded instance of diabetic gangrene in my personal experience. The patient was a man of middle age, sent to the hospital with strangulated hernia of some four or five day's duration.

The attending physician informed us that the man had long been a diabetic. Operation was deemed imperative, and was undertaken. There was but a small patch of gangrene in the bowel, which was left in the wound after relieving the constriction, so as to allow the formation of an artificial anus. Next day not only the bowel but the edges of the wound and the surrounding tissues were gangrenous, and death rapidly ensued. It was a case, then, of

rapid moist gangrene, following a comparatively small incision.

I have seen other cases, which I believe were instances of diabetic gangrene, though this was not demonstrated by an examination of the urine, that bear out Dr. Morton's statement of the liability for this condition to be precipitated by slight injuries, such as the rubbing of a boot or cutting a corn. The gangrene is moist rather than dry, which may be a valuable factor in diagnosis. Whenever we see spontaneous gangrene of the moist variety, it should at least excite the suspicion of diabetes.

There are, however, other influences which predispose to spontaneous gangrene, the most common, perhaps, being alcoholism. Verneuil refers to this fact, and says that in what he calls "alcohol-diabetes" gangrene is particularly apt to occur, as there are then two predisposing causes acting at the same time.

Another cause of gangrene after amputations and other severe operations, as surgeons are aware, is the presence of certain forms of Bright's disease, the granular kidney especially. In these cases diabetes may sometimes co-exist, and the presence of sugar fail to be recognized, simply because it is not looked for.

As to the treatment of diabetic gangrene, locally, the less done, as a rule, the better. I would go further than Dr. Morton, and would wait not merely for the line of demarcation, but for that of separation, which may appear some days or even weeks later than the former, before proceeding to amputate. In the majority of cases of spontaneous gangrene, diabetic or not, it is the better practice to trim away dead parts with forceps and scissors, rather than to attempt a radical operation. I have seen, after amputation, rapid return of the gangrene, spreading extensively and causing death.

Constitutionally, it is a suggestive fact that the one remedy of greatest value in spontaneous gangrene of any kind is a

remedy which has obtained a deserved reputation in the management of diabetes, *i. e.*, opium. Opium in doses of one grain or one grain and a half, night and morning, or larger doses if needed, will often show its good effect in tending to arrest the gangrene in a short time. In many cases of spreading ulceration opium is also of value.

For the treatment of diabetic gangrene then, opium internally and the less heroic treatment of the affected part seems to me to offer the best prospect.

Dr. James Tyson: Notwithstanding the exhibit made in the exhaustive paper of Dr. Hunt, I cannot but think that diabetic gangrene is a rare disease. Taking my own experience, referred to by Dr. Hunt, of fifty-five recorded cases in private practice since 1884, and probably at least twenty-five more prior to that date not so accurately recorded, and realizing, as I always have, its possible occurrence, the fact that not a single case has occurred under my observation is a significant one. It is to be remembered, of course, that many of these cases passed from my notice before they terminated. Dr. Hunt has asked for a parallel to his case of paralysis, etc. I cannot give an exact parallel, but one sufficiently so to justify an allusion in the same connection. A gentleman of multiplied business and financial interests came under my care for diabetes, when he was fifty-two years old. Three years later there occurred a sudden hemiplegia. Within a few days after the paralysis occurred, the glycosuria disappeared and has not returned, though nearly two years have since elapsed. The percentage of sugar had been at one time as much as seven per cent., and was constantly two and three per cent.

In regard to the infrequency of diabetes among the poor no better proof could be given than the fact that in the Philadelphia Hospital, where more than a thousand patients are present at one time, it will often be impossible for weeks to get a case for lecture.

Dr. Morton has alluded to the extreme pain in diabetic gangrene. I have observed the same thing in gangrene associated with granular kidney. I scarcely think it should be regarded as peculiar to the gangrene of diabetes.

Dr. James Darrach: I have seen but one case of gangrene associated with diabetes, the one noted by Dr. Hunt in his admirable and exhaustive paper delivered to the Society this evening. Two others of the legs and two of internal gangrene have also come under my notice in my practice. Those of the legs were in women over seventy years of age, and while I cannot recollect about the condition of the urine in these cases, from my custom of examining the urine in old people, for sugar, it having been stated that it was not an unusual thing to find it in the urine of the aged, I doubt the probability of sugar escaping my notice.

Dr. Hunt has mentioned that diabetes is a disease of the well-to-do, and referred to the rarity of the disease in hospital patients among the poor. This would appear to be corroborated by the statement of Dr. Jordas, who writes that in an aggregate of 22,735 admissions into, I think, four hospitals in Lisbon, there was not one case of diabetes, and of 5700 deaths, in 1862, four only were from this cause. Perhaps climate may, in a measure, account for this small proportion of diabetes, the inhabitants of Southern countries being considered by some writers not so liable to this disease; and I might add that as some malcondition of the nervous system holds a prominent position in the etiology of diabetes, we might find an explanation of the fact that the inhabitants of the sunny South are not exposed to the strain upon that part of their organization, as are those who live in countries where the brain is taxed to the utmost.

Dr. Hunt has spoken of the more palpable and well-recognized forms of gangrene. Dr. Wm. H. Dickinson has reported that in the autopsies of five cases of

diabetes he has found peculiar morbid changes in the cerebro-spinal system, consisting in dilatation of the arteries and a degeneration of the nervous matter at certain points external to them occasioning destruction and excavation of the tissue around the vessel. Kaposi describes a peculiar form of inflammatory gangrene of the skin, which I suggest might be owing—as has been described as the pathological condition in shingles—to necrosis of the terminal nerve filaments. I mention these as a probable addition to gangrenous affections in diabetes, which I believe Dr. Hunt does not refer to in his paper, and would suggest that the nervous system should be examined more than has been done in autopsies of this disease.

I would inquire of Dr. Cohen whether he included in his statement cases with small amounts of sugar, and whether the sugar was established by the cupric oxide test alone. I feel interested, as from my own examinations I have been led to doubt the existence of this element in normal urine, the existence of sugar has been supposed from the reduction of the oxide of copper. This reaction is accounted for by the uric acid and kreatinin. I would like to ask Dr. Tyson how far his examinations sustain this view.

Dr. W. Osler: I think that Dr. Hunt has underrated the proportion of cases of diabetes that die with pulmonary complication. In my own experience of six autopsies there were three—two of consumption and one of gangrene.

Frerichs, in his important monograph which contains a study of four hundred cases, states that nearly one-half of all diabetics die of lung disease.

There are three forms: The most common is a rapidly fatal lobar pneumonia very liable to terminate in gangrene.

Second is a broncho-pneumonia, which is still more liable to be complicated with gangrene.

Thirdly, and most commonly, there is a

genuine consumption, which is tuberculous, as demonstrated by the presence of the bacillus.

Dr. Nancrede: I would like to add another case to the list, which I had supposed was one of those referred to by Dr. Neilson, but it appears not; it was one of moist gangrene with large amounts of sugar in the urine, where the disease started in the fourth toe. In the other case, which Dr. Neilson mentioned to Dr. Hunt, I amputated the thigh high up for moist gangrene *not* due to diabetes. It illustrates the futility of amputating anywhere near the site of disease, for the artery was thrombosed to the groin. Unless the operation be done above the knee for gangrene of the foot, we are almost certain to have recurrence in the wound with rapid spread of the disease and death.

The practical outcome of this discussion should be to lay down a rule not to undertake any serious operation unless the urine has been tested for sugar, as well as for albumin. Since I assisted at an amputation of the breast in the practice of a friend, in which the urine had been found free from albumin prior to operation, but after the amputation the urine was found to be loaded with sugar, I have pursued this rule. Perhaps if the urinary examination included testing for sugar, as well as albumin, there would be fewer unexpectedly fatal terminations to operations and more cases of diabetes recognized.

Dr. J. William White: If Dr. Hunt had been able to elicit from his correspondents the facts as to coexistence or absence of certain other conditions likely to give rise to gangrene, we could better estimate the relative etiological importance of diabetes in these cases. Thus, in one of Dr. Agnew's cases which I had the opportunity of seeing, and upon whom I performed a knee-joint amputation, the subject was a man of fifty-two years, with chronic alcoholism and with marked atheromatous changes in the vessels. In this case we had, therefore, two con-

ditions, either of which was competent to produce gangrene without the concurrent diabetes. Dr. Hunt's admirable and otherwise exhaustive paper would, perhaps, have been more conclusive had it been possible to include these points.

Dr. S. Solis-Cohen: Dr. Nancrede's remarks suggest an explanation of the comparative meagreness of hospital records of diabetes, and of its supposed rarity among the poorer classes. Urinary analysis is not as general or as thorough as it ought to be. In the Medical Clinic of Jefferson Medical College Hospital, where it is the invariable rule to examine the urine of every patient, no matter how trifling the complaint, not a year passes that one or more cases of unsuspected diabetes, or at least glycosuria, are not discovered. Further, I would suggest that out-patient clinics or dispensaries, and not hospital wards, are the places to search for public records of diabetics of the poorer class. The Jefferson Clinic has, I suppose, from five to ten or more cases of diabetes annually, in a service of about four thousand new cases. At the Philadelphia Polyclinic, during nine months of this year, between three hundred and four hundred patients have been treated in the Medical Department, of whom three have been cases of diabetes. This large proportion is to be accounted for by the greater number of special clinics in the same building, reducing the attendance at the general clinic. Taking the entire non-surgical service of the institution, the proportion of diabetics would be reduced somewhat below that of the Jefferson clinic. Of course, in institutions like these, consultation cases increase the average of rare diseases of all kinds above that of ordinary dispensaries. Still, considering the aggregate number of diabetics at these two clinics, of which I have personal knowledge, and remembering that urinary examinations are not as thorough as they should be in private practice among the poor, and that diabetics, as a rule, are walking cases until near the last; and there-

fore not to be looked for in hospital wards. I must doubt the force of Dr. Hunt's social distinction.

Dr. Cohen replied to Dr. Darrach that dependence was never placed upon a single test, and there was little probability that uric acid and kreatinine had been mistaken for sugar. One disadvantage of dispensary practice in these chronic cases was the inability to keep patients under observation for more than a short time. They wandered elsewhere, and might possibly be doubly or trebly reported.

Dr. Thomas S. K. Morton: I should like to make more especial point of what the practice of antisepsis enables the surgeon to accomplish in dealing not only with diabetes, but with all sorts and conditions of depraved system when upon them have been engrafted complications which, with modern methods of wound treatment, are at least entitled to have some attempt made for their relief.

Under this heading would be included diabetes, Bright's disease, the graver infectious and contagious diseases, ataxia, and all other serious nutritional alterations dependent upon nerve or other change.

Now the dangers principally to be dreaded in undertaking operations in persons subject to such diseases, are those of *infection*. Little need be feared until this dire calamity has occurred. The most innocent forms of senile or other gangrene may at any time become so infected and change their nature to one of greatest malignancy. On the other hand, even large areas of necrotic tissue will not putrefy nor infect the system until bacterial decomposition takes place in them.

I am convinced that infected gangrene existing without skin lesion usually has derived that complication from noxious bacteria lying deep in the various appendages of the skin. Hence the evident advisability of protecting a part about to become sphacelated by antiseptic covering; preferably by a carbolic or combined carbolic and sublimate dressing, for in such cases carbolic

acid is a necessary constituent of the dressing that the fat and other skin glands may be deeply penetrated and disinfected by its influence—a property not possessed by sublimate and other disinfectants.

When infection takes place in a case of one of the above-mentioned diseases, the already depraved tissues are powerless to resist the onslaughts of bacteria, and frightful pillage and destruction are the result. Especially is the system unable to cope with the attacks of bacteria when diabetes is present, for then is provided in addition to the other favorite pabula of bacteria, glucose, which, in tissue solution, affords a most capital medium for the culture and dissemination of poisonous and tissue-destroying microorganisms.

We must then have ever in mind, that in dealing with surgical complications of any of the diseases which have been quoted, but more especially in the case of diabetes, that our object should be:

1. To prevent infection of a part about to become gangrenous, by instituting disinfection and subsequent protection; and, above and beyond all, never to apply a poultice.
2. Only to interfere surgically when absolutely necessary.
3. To operate only with thorough and powerful antisepsis—asepsis will never answer in these cases.
4. To relieve tension absolutely, and to eradicate as much of the diseased tissues as possible, and to disinfect thoroughly and render sterile all that cannot be so treated; for unless this be accomplished, a favorable result, or arrest of the destructive process, cannot be expected.
5. In suturing dressing, to make no great traction upon any portion of the wound or its surroundings, and to provide most liberally for drainage.
6. To dress the wound in such a way as to prohibit subsequent infection, and to redress it upon the slightest indication.
7. To remember that non-union and

non-healing will probably result, but that we may be bold in doing what seems indicated, for local harm cannot come save by infection.

Dr. De Forest Willard: I can not agree with the suggestion to make incisions to relieve the tension. I consider any interference injudicious in slow gangrene. The only safe plan is, to wait for the line of demarcation. Some months since, a man almost moribund came to the hospital with gangrene of the leg, and with crepitation extending as high as the hip joint. Under excessive stimulation, twenty-four ounces of whisky daily, he rallied, and I cut away the parts with scissors, through the knee-joint. A quick operation, or one near the part, would have caused death. Recovery has taken place, though a spot is now making its appearance on the toe of the remaining leg.

Dr. Tyson: I am very glad to hear Dr. Darrach's remarks. I do not believe that sugar is ever present in normal urine. The copper-reducing substance in such supposed cases is most frequently uric acid.

Dr. Ashhurst: The pain of diabetic gangrene so frequently alluded to this evening is, I think, rather a feature of the local process than of constitutional cause. Slow gangrene, especially if being superficial, it involves a greater extent of nerve distribution, is more painful than rapid or deep-seated gangrene, where the nerves escape to a great extent, or are quickly destroyed.

The recommendation to amputate at a very high point in cases of spontaneous gangrene, is by no means new, having been strongly urged many years ago by James, of Exeter; it has been recently revived by Mr. Holmes and other surgeons, but the general consensus of surgical opinion is against it. In traumatic gangrene, of course the case is different. There the proper course is, I think, to amputate as soon as possible, at a point well above the limit of the gangrenous portion.

EYE, EAR AND THROAT.

DISTINCT AND INDISTINCT VISION.

BY

JAMES JURIN,

LONDON.

An appendix to "a compleat system of opticks,

BY ROBERT SMITH, L. L. D.

Professor of Astronomy and Experimental Philosophy, at Cambridge, and Master of Mechanicks to his MAJESTY." Cambridge, 1738.

Continued from February Progress, Page 358.

The first of these limits, or the least distance at which we can see with *Perfect Vision* is easily settled. For besides Dr. Porterfield's experiment, who determines it to be about seven inches to his own eye, we have the concurrent experience of the generality of persons who are at their full growth, and whose eyes are in no way im-

paired by age; for as much as in looking at minute objects, as the divisions upon a *Gunter's* line, or those of a diagonal scale for half an inch, or in examining the fineness of linen and cambrick, or chusing lace, &c., they hold the objects at five, six or seven inches from the eye. Whence it may reasonably be presumed that the nearest distance for *Perfect Vision* is commonly five, six or seven inches. And this I shall afterwards prove by another method.

107. But as for the other of these limits, or the greatest distance at which *Perfect Vision* can be obtained, it is a matter of somewhat more difficulty.

This greatest distance is by Dr. Porterfield determined for his own eye to be twenty-seven inches. But that to the generality of eyes this distance is much greater, may reasonably be presumed from the distinctness which we see a small misting rain, when walking in a piazza, or coming out of a church and within not less than six or eight feet from the door; or the small filaments of silk upon which spiders transport themselves through the air, at a greater distance; or the string of a boy's kite at a great height in the air. And to find what this distance is for a given eye, it may be proper to determine the *radius of dissipation*

at some great distance by Art. 93, or 95, or rather by Art. 63, or 64, and from thence to compute at what lesser distance the *radius of dissipation* must vanish, that lesser distance being the utmost limit of *Perfect Vision*. But in order to do this it will be necessary to consider the measures of some of the parts of the eye.

108. In these measures I shall generally follow the famous Mons.* Petit, he having bestowed more pains upon the examination of them than any other author I know of; but shall reduce them from the *French* lines in which he has given them, to the tenths of the *London* inch and decimals of those tenths, following herein the proportion established by my ingenious friend, Mr. George Graham, between the *London* yard and the half toise of *Paris*, in some very accurate measures that have been mutually exchanged between the *Royal Society* and the *Royal Academy of Sciences* at *Paris*, namely that of 36 to 38, 355.

	tenths.
The radius of the convexity of the <i>cornea</i> is commonly	3,3294
The radius of the anterior convexity of the crystalline at a medium from 26 eyes is	3,3081
The radius of the posterior convexity of the crystalline at a medium from all same eyes is	2,5056
The axis of greatest thickness of the crystalline from all the same eyes at a medium is	1,8525
The joint axis of the <i>cornea</i> and the aqueous humour is commonly	1,0358

109. The refraction of the aqueous humour, or the proportion between the sines of incidence and refraction, we here suppose to be the same, with that out of air into water, namely that of 4 to 3.

110. The refraction of the *cornea* we suppose to be the same with that of the aqueous humour, so that the incident rays suffer no new refraction in passing from the *cornea* into the aqueous humour.

(TO BE CONTINUED.)

OBSTETRICS AND GNYÆCOLOGY

DELIVERY VIA THE RECTUM.

New York Medical Record
March 2d

At a recent meeting of the New York Academy of Medicine, Dr. J. P. Tuttle read

a report which illustrated the difficulty often encountered in making a diagnosis of abdominal gestation. The patient, aged forty-five, had been in delicate health for many years; her stomach had always been sensitive and liable to attacks of nausea. She had had what she called "falling of the womb." She had at times missed a period. Considering the antecedent history, suspension of menstruation, followed by a persistent discharge, nausea, and a feeling of heat in the vagina, had not been taken as having special significance. When extreme constipation and paroxysms of pain referred to the rectum had developed, it had been thought due to what seemed a gravid and retroflexed uterus bearing backward upon the rectum. The patient had refused to be examined under ether, and had put herself in the hands of an electrician, who, after many applications of various currents, had left her with a very weak pulse and stomach and still flowing. From the woman's husband it had been learned that at one of these electrical séances there had been a severe hæmorrhage, with the discharge of a mass of clots. As the patient had become considerably better for a time, the condition had then been thought to be fibroid tumor or hæmatoma between the uterus and the rectum. She had insisted on going about again, although the flow had persisted in spite of internal medication and external applications. The tumor in the pelvis had meanwhile grown steadily, sagged lower and lower in the pelvis, and become softer. Later on the hæmorrhage had gradually checked by applications of the persulphate of iron. Shortly after and quite suddenly, during an effort at stool, a foetus had come away through a rent into the rectum, from which latter it was expelled, dead, but not

* Memoires de l'Acad. Royale 1728, 1730.

altered beyond a slight maceration. The woman had then been put under ether and an attempt made to remove the placenta through the rent; but the shock produced and the hæmorrhage had been so violent that it had been necessary to desist. No other operative interference, least of all laparotomy, could have been endured at that time. The patient had slowly sunk, and died in collapse. Impregnation had probably occurred at the left ovary or in the left tube, the foetus escaping afterward into the broad ligament, and from there, by pressure on the rectum in efforts at stool, breaking through the thinned rectal wall into the rectum itself.

Dr. R. A. Murray presented the tubes and ovaries of a woman upon whom, in view of a series of quite obscure symptoms, he had operated, expecting to find extra-uterine pregnancy, but being immediately impelled to surgical interference by the constant pain and loss of flesh which the patient had suffered from. Both ovaries had been found tightly bound down by extensive adhesions, in which both dissected free with great caution, and in spite of much hæmorrhage. A fold of the broad ligament had had to be sewed together on itself before the hæmorrhage was checked. The patient had recovered; all her symptoms, both local and reflex, had ceased; and her face had no longer the painful expression it had once worn. The case was significant in view of the symptoms simulating pregnancy which had deceived several expert men during five months previous to operation. It had turned out to be hæmatocele, pyosalpinx, and abscess of the ovary on both sides.

Dr. H. C. Coe opened the discussion on these two cases of real and simulated extra uterine gestation presented by Dr. Tuttle and Dr. Murray. He cited an instance in which a foetus of about four months had been discharged from the rectum after an attack of localized peritonitis. In this case the woman had been married nineteen years, had not missed a period to her knowledge,

and when the sac came away it had been supposed to be a fibroid of the uterus. The foetus had evidently been dead a long time.

Dr. A. F. Currier spoke of the uncertainty of electricity used in suspected cases of extra-uterine gestation. It might do great harm if some other conditions were present, such as pyosalpinx. It did not lead to diagnosis, and, moreover, was advised by its advocates to be used in the first three months of the gestation, when the likelihood of a successful result by laparotomy was greatest, but would be lessened if electricity had been used previously.

Dr. A. P. Dudley remarked that we were still far from being able to recognize extra-uterine pregnancy in all cases. One prolific source of error arose from the fact that adhesions between the intestines in the pelvis often caused nausea and other symptoms like those of pregnancy.

PORRO'S

OPERATION.

In the *Lancet* a remarkable case is reported of a rachitic woman, thirty years of age, thirty-six inches high, so deformed in the pantois and lower limbs as to be able to walk with crutches only. She menstruated last on February 3, 1888. Being evidently pregnant she was admitted to the Lying-in Hospital; and, on November 1st subjected to Porro's operation. On December 31st, says Dr. Duncan, "mother and child are perfectly well." The report goes on to say, "although the Porro operation proper had up to the end of 1884 been performed 152 times, with a mortality of 56.57 per cent. it had been done in Great Britain only ten times, and of these nine mothers died. Since 1884 there have been, as far as known, 62 Porro operations, with 13 deaths, or a mortality of about 21 per cent. Seven cases have occurred in Great Britain, six of which have recovered, a truly marvelous improvement in the results since 1884.

The great question to decide is whether Porro's operation should be preferred to the Cæsarean section, according to the improved method of Sanger; personally I am in favor of the removal of the uterus and ovaries."

PATHOLOGY AND HYGIENE.

THE MORTUARY STATISTICS OF PHILADELPHIA.

BY

HARRY T. GUSS,

M. D.

Read to the Philadelphia
County Medical Society.
Stated Meeting, January
9, 1889.

The memorable injunction of Cullen was to "obviate the tendency to death." This is conspicuous as a beacon light in the history of medicine and of therapeutics. Cullen's precept receives constant application. The use

of the ligature or tourniquet to arrest hemorrhage, the several urgent surgical operations, the use of stimulants in low febrile conditions, the application of cold and antipyretics in sunstroke and hyperpyrexia, and the great advances in modern antiseptic surgery and therapeutics, all have the objective point of Cullen's injunction. As the ultimate tendency of disease, if not removed, is to death, the use of all therapeutic agents must be, either directly or indirectly, to obviate the tendency to death.

The numerous diseases to which the human family are subject have certain well-marked tendencies to death. This is slight in some affections, almost invariable in others, and some diseases, slight in themselves, are prone to complicating affections of fatal disposition. Studies are made of certain diseases from time to time, from limited numbers of cases, and these serve to fix the data respecting the prevalence and mortality of these diseases.

There is no practicable way of ascertaining the number of cases of diseases occurring in a city, community, or country. It is possible, however, to collect the statistics relating to deaths and the causes of death, with other valuable data; and from large numbers it is possible to show the proportion in which death occurs from one cause as compared with another, or with the whole number of deaths. As these relative proportions bear a certain relation to the living population as well, comparisons are

interesting and valuable. The physician must understand this tendency to death from different causes and diseases, that he may the better be able to perform his duty to his patients and to himself.

At the outset of this inquiry, the pertinent question presents itself, *What are the causes of death?* The general idea of cause is that without which another thing called the effect cannot be; and in medical literature, and in referring to the cause of death, we recognize three kinds—the immediate, the complicating, and the remote.

(1) The *immediate*, or proximate, cause of death in some instances is the result of accident, or the sudden and unexpected onset of grave symptoms. In other cases it is referred erroneously to some pathological lesion which is an accompaniment of death itself.

(2) The *complicating*, or concurring, cause of death is usually some coexisting or complicating disease of recent origin.

(3) The *remote*, or primary, cause of death is generally some latent disorder or physical condition which predisposes to disease in general, or to some particular affection; or it may sometimes be referred to some of the specific general diseases.

However, in a classification which admits but one cause of death we must consider the *determining cause*, which may be of either of these kinds, and would depend upon the clinical history of a given case. This is, practically, the cause without which a death would not have occurred, and it should be referred to some recognized clinical disease or accidental cause, though the relative causes may be merely important symptoms, or may even belong outside of clinical nomenclature. Examples of these different causes are here given, with the determining cause in each instance in italics.

Immediate.—Hemorrhage from bowels. Convulsions. *Apoplexy*.

Complicating. — Peritonitis. *Catarrhal pneumonia*. Hypertrophy of heart.

Remote. — *Typhoid Fever*. Whooping-cough. Bright's disease.

The blank physician's certificate for the return of a death in this city requires only the "cause of death," and a careless physician might assign any of the causes given. The blanks used in the collection of the mortality statistics of the last census asked for the "cause or causes of death." Many life insurance companies, in their certificates, require all of these causes to be given.

Death is the termination of life, an essential and physical phenomenon, and in whatever way accomplished, whether by natural mode or by violence, the event itself, being the result of preceding causes, is beyond our control. Hence, the causes of death must not be confounded with the modes of dying and the attendant lesions, which naturally are the result of disease.

In the simplest expression, death occurs in two distinct modes through each—the heart and lungs. *Cardiac death* occurs from (1) asthenia, debility, or slow exhaustion; or from (2) syncope, or sudden failure of the heart's action. *Pulmonary death* occurs from (1) apnoea or asphyxia, access of air being shut off from the lungs; or from (2) coma, or indirect apnoea, through extinction of the brain functions from apoplexy, narcotic poisons, etc. Death may also occur through a combination of these modes. It is to be regretted that deaths are attributed sometimes to these various modes of dying and to the attendant pathological conditions, which are but features of the dissolution itself.

These thoughts are suggested by an examination of the Health Officer's Annual Report for 1887, which has just made its appearance. The study I have made is the more seasonable and important because the medical profession throughout the country will, no doubt, in the course of a few months, be requested to coöperate with the government in the collection of the mortality and vital statistics for the next census.

Every physician should take a personal pride in having this report as full and accurate as it is possible to make it.

From a careful examination of the tables given in the Health Officer's Annual Reports it is apparent that the causes of death are clearly stated in the vast majority of cases, and embrace a very large classification. But there are some causes given which are only symptoms; others are mere general statements, as disease of the liver, etc.; some refer to the mode of dying, and are not causes at all; and others express mere conjectures, so crude and irrelative as to diagnosis, that it is little wonder that the patients of physicians who give such certificates should die, for without a definite diagnosis treatment is of little avail. I desire to draw particular attention to this matter, to apply counter-irritation, as it were, to this unsightly blemish on the face of the mortality statistics, that the defect may be remedied or abolished.

In compiling these tables the Registrar has evidently reduced convertible terms, such as pneumonia and pleurisy, to inflammation of the lungs and of the pleura, but his lack of medical training is shown where he has not applied the rule throughout the list. For example, each of the following has a separate classification in the same table: abscess of kidneys and renal abscess, catarrhal fever and influenza, hypertrophy of the heart, icterus and jaundice, fracture of the femur and of the thigh, perforation of the bowels and of the intestines, septicæmia and blood-poisoning, etc.

Excluding all of this class of synonymous terms, many of which are objectionable as being neither medical nor scientific, I will now present a few of the hopeless guesses and indefinite expressions given as the causes of death: chill, colic, general congestion, cramps, nervous fever, fever, neurosis, visceral neuralgia, cirrhosis, sclerosis, coma, sarcoma, disease of brain, liver, etc., heart-clot, hectic fever, purpura hemiplegica, syncope, tympanitis, masturbation,

boils, indigestion, hepatized lungs, indurated lungs, etc. All such indefinite terms are discreditable and a reproach to the profession. Many of them, no doubt, are to be attributed to irregular practitioners. I would even take exception to the use of the terms childbirth, teething, etc., which are physiological functions. They can only be the predisposing conditions favorable to disease.

Some of these terms appear to have been used with diplomacy; and in some cases, no doubt, the physician is not entirely to blame. For instance, that fair young girl, the flower of a family, wasted away and died of consumption, fully recognized by the doctor. But the family probably wished to be deceived in the matter, and he gave his certificate that it was only "hectic fever." And again, the friends of the deceased would be likely to have more faith in the physician who wrote "visceral neuralgia" than if he had given the affection its common name in plain English. Then, too, a physician may have committed himself to some common-place diagnosis, and in the event of death he would give his certificate for this disorder, rather than for another which might give rise to the charge that he did not know the disease at first. Or another might give as the cause of death some disorder which is popularly considered as necessarily fatal, as cancer, consumption, etc., though the malady was really something else. These are sources of error to be guarded against, and it is to be hoped that physicians will be more careful in this regard in the future.

Some recognized diseases and causes of death are not sufficiently differentiated in these tables and reports. One of these is infantile paralysis. The number of deaths due to this disease can only be inferred from an examination of the columns giving the ages under paralysis—not a very certain or convenient method. Hereditary syphilis and congenital jaundice are also of this class.

Though an insignificant number of deaths are attributed to "unknown" causes, it must not be inferred that the other causes given are known, or that they satisfactorily explain the determining cause of death. I have already adverted to some of these. There are conditions which rarely exist as recognized affections, but most frequently they are the culminating symptoms or expression of another disease, and should be considered a part of the mode of death. Dropsy of the lungs, heart-clot, convulsions, etc., are of this class. I might also include uræmia, a disease of comparatively recent distinction, which term is also used to designate the final symptoms of Bright's disease, etc.

In studying the mortality and the causes of death several factors are to be noted. The tables given in the reports present accurate and valuable data respecting the relations of age, sex, locality, color, nationality, etc., which do not call for extended notice in this connection. I shall, however, briefly, consider the relations of births and of season.

The relations of births to deaths are particularly interesting. The increase in the population is due to the natural excess of births over deaths. This has ever been true, except during the prevalence of war, pestilence, or famine. In a dense population, however, there is a birth-rate lower than natural, and a death-rate which is greater; hence, sometimes, owing to the prevalence of some disease, or the occurrence of unusual meteorological conditions, the death-rate may exceed the birth-rate. This has been the case in Philadelphia in eight years out of the past twenty-seven. During this period the average annual birth-rate has been 24.35 to 1000 persons living, and the death-rate has been 21.84, and the average annual excess of births over deaths has been 1070. But in 1881 the deaths exceeded the births by 1361. The explanation of this increased mortality is found in the unusual prevalence of smallpox (1336 deaths) and of scarlet fever (486 deaths).

Again, in 1876, when there was an excess of 197 deaths, there were four factors, each of which alone would account for this excess; a large floating population, a very hot summer (producing the great mortality of 1173 deaths from cholera infantum alone), and unusual epidemics of diphtheria (709 deaths), and of small-pox (407 deaths). In 1875 there was an epidemic of scarlet fever (1032 deaths.) Another epidemic of small-pox in 1871-72 (2585 deaths in the latter year) more than accounts for the small excess of deaths in 1872. Indeed, small-pox was prevalent in 1862-65, when there was an excess of deaths. But there was also a most noticeable decrease in the number of births during those years. This is to be accounted for by the absence from home of many heads of families who were engaged in the late civil war. In 1862 there was a falling off of 2530 births; about 15 per cent. as compared with 1861, though the average annual increase of births for twenty-five years is over 300. The increase in the birth-rate in 1866 is almost as marked as is the decrease in 1862. Wars not only decimate the living population, but retard the natural increase as well.

The relation of season to deaths have been briefly hinted at in connection with the great number of deaths from cholera infantum in 1876. Everybody remembers the hot summer of the Centennial year. In a single week in July there were 90 deaths from sunstroke, and in that same week the total number of deaths was 864. This was probably the greatest mortality for a single week in the history of the city. Usually the greatest adult mortality occurs in March, and the greatest infant mortality in July or August. More deaths (about 55 per cent.) occur in the half year from March to August, than in the other half year from September to February (about 45 per cent.). The fewest deaths occur usually in June and November. The meteorological reports must be studied in connection with the daily, or, at most, the weekly,

mortality, to be of any real value. The monthly and annual means are too constant for practical deductions.

In the Health Officer's Reports are published, on opposite pages, and convenient for reference; the weekly reports of interments and the meteorological observations for the corresponding week. The arrangement is convenient, but it is also fallacious.

First, with regard to the mortality. A weekly report of interments does not represent the mortality for a week, nor for a given period of seven days. This report "represents the number of interments during the seven days ending at 12 o'clock Saturdays," and it is made up from the certificates which are returned to the health office after burial; it includes only "persons who have actually died in the city of Philadelphia," and it must be considered as being from three to five or more days later than the current mortality. Such a report is well enough for weekly publication in the newspapers, as it serves to keep the public apprised of the mortality so far as it can be measured by the weekly interments, but in no other sense can such a record be of any value. From a medical standpoint it is utterly misleading and untrustworthy. Why should the interments masquerade as the mortality of a great city? What relations exist between meteorological conditions and interments? If any, it concerns the undertaker, the grave-digger, and the friends of the deceased.

Second. The potential meteorological conditions must be presumed to have been acting for some hours or days preceding the occurrence of a death; and this added to the variable lapse of time before interment, tends to increase the fallacy.

Therefore, in studying these weekly reports, these facts must be kept in mind. For instance, if the meteorological report for a given week shows excessive heat or cold, or sudden changes in temperature and barometric pressure, the effects of the same on the mortality must be looked for

in the following as well as in the corresponding weekly report of interments. But even then it must be greatly a matter of conjecture, owing to the variable lapse of time between deaths and interments.

But the deception does not end here. The entire system of tabulations in the reports seem to rest on this false basis of weekly interments instead of daily or weekly deaths. This is apparent in Table X., Report for 1887, where the figures given are identical with the weekly reports of interments, though this table is headed "the number of deaths in each week, etc., for the year 1887." These same figures are also used in Table XXXII., "Total weekly deaths, with meteorological reports, etc." In connection with these tables should be mentioned the two charts "exhibiting the course of the total mortality," and the "mortality from diphtheria and scarlet fever." All of these are equally misleading and fallacious, for they represent the interments and not the deaths occurring in the weekly periods. Every death certificate gives the date of death, and this should be the controlling factor in making weekly reports for statistical purposes and for comparison with the meteorological observations.

Again, these weekly reports of interments are used in preparing the monthly tables contained in the Appendix to the Health Officer's Report, and with equal disregard of accuracy. The table of "Interments during January," is made up from four weekly reports; February, four, March, five; and so on. These monthly tables are intended to represent the actual mortality; but how fallacious it is to have the interments reported during twenty-eight days in January and thirty-five days from the 27th of February to the 2d of April, pass for the mortality of January and March, which each have thirty-one days. A summary of these tables is given in Table XXVI., "Mortality in each month, from all causes, during 1887." It will be observed that the terms mortality, deaths, and inter-

ments, are used synonymously in this report, though the basis of the whole is the interments, as I have already shown.

In Table XXXV., "Recapitulation for for past twenty-seven years and six months," the total number of births is given at 411,851, though the correct total is 100,000 greater. This same error appears in this table in the report for 1886. Then it was probably a typographical error, but now it is an inexcusable clerical blunder.

In Table XIII., "Deaths in each Ward," we have "deaths to population" estimated upon the population in 1880. It cannot be possible that the wards have the same relative populations now that they had then. The population in a ward in the older and more densely built part of the city would not naturally show the increase that would be found in a suburban ward where thousands of new houses have been erected during this same period. On this basis the death-rate would be more than 25 per 1000, which is certainly too high.

Such is the method and the fallacy in these reports for this city. So far as my inquiries have extended into the methods pursued in other cities, I have found none so faulty in these respects. If statistics are of value, they are valuable only when they are true and above a suspicion of fallacy.

The alphabetical order in which the causes of death are enumerated in these tables is also a most inconvenient arrangement. In last year's report the mortality table for the year contains 468 causes. Of course, many of these are synonymous terms, but they add to the confusion. To make the statistics of mortality valuable and readily available to the physician, the causes of death should be classified under the divisions in which diseases are grouped clinically and in the standard works. This is entirely practicable, and I have made the following classification, based upon clinical and rational association, rather than upon arbitrary rule, or pathological phenomena, or morbid processes.

CAUSES OF DEATH

- | | |
|---|---|
| morbid agents.
B. From derangements of nutrition.
II. Diseases of the respiratory system.
III. Diseases of the circulatory system.
IV. Diseases of the nervous system.
V. Diseases of the digestive system.
VI. Diseases of the blood and blood-glandular system.
VII. Diseases of the genito-urinary system.
A. The urinary system and male organs of generation.
B. The female organs of generation.
C. Affections depending on pregnancy.
VIII. General surgical diseases.
A. Of the superficial and visceral structures.
B. Of the bones and joints.
IX. General and indefinite causes.
A. Causes mostly relating to the extremes of life, and referring to failure of nutrition.
B. Causes relating to the new-born.
C. Prenatal causes.
X. Accidental Causes. | I. General diseases.
A. From special |
|---|---|

The need of such a classification, when making a special research, was the first suggestion of this work. The Report on the Mortality and Vital Statistics, Census of 1880, contains a classification which, in a measure, accords with my arrangement; but it represents rather the general pathological association of diseases than their clinical relations as the causes of death. The magnitude of the census statistics necessitated the condensation and grouping of the minor causes of death. In the several tables there are only about one hundred specified causes with about twenty groupings. But in our health officer's reports all the causes are enumerated, and by excluding the synonymous terms, every particular cause of death could be given in practical classification and in less space, and it would be vastly more valuable.

In illustration of this classification, I

have taken the pains to tabulate the principal causes of death given in the Health Officer's Report for 1887, and for comparison I have introduced the statistics of the same reports for 1876 and 1886. For comparison with general statistics, I have introduced those of the U. S. Census Report for 1880, and in order to make these available at a glance, I have reduced the number of deaths by a common multiple, so that the total number represented is about 20,000. This corresponds closely with the number of deaths occurring in this city, as shown in the adjoining column, and comparisons are obvious.

This table represents the total mortality for a year. By giving the monthly mortality in connection with it, what a graphic representation of the relations of season to deaths would be displayed. And as the number of deaths is an indirect index of the prevalence of diseases—as nearly accurate as any that can be suggested—it would also serve to show the relations of season to diseases and their causation.

This table is presented in full as an appendix to this inquiry, together with a summary of the total mortality from the diseases in the different classes.

No single classification or tabulation can represent all of the desirable features, nor present all of the valuable data. Nor will that which was considered right ten years ago represent the state of pathology and clinical distinctions, and hence I think this classification exhibits special and practical features.

The progressive increase in the mortality from certain causes is illustrated in this table for this city, and also confirmed by the census statistics for the United States since 1850. The following are of this class: puerperal septicæmia, venereal diseases, cancer, tumor, diabetes, apoplexy, paralysis, mental diseases, stillbirths, malformations, pneumonia, hernia, debility, peritonitis, exposure, and neglect, etc. Some allowances should be made in some

instances for advanced methods of discrimination, but these would not materially lessen the percentages. Erysipelas is conspicuous as having been steadily decreasing as a cause of death during this period.

Comparing the mortality in Philadelphia in 1886 and 1887, and making allowances for the differences in population and deaths in these years, I find that there is an actual increase of over 70 per cent. in the number of deaths attributed directly to alcoholism. Comparing 1886 and 1876, the increase is only about 15 per cent. This is rather surprising, for it has been argued of recent years that the decrease in the consumption of spirituous liquors and the corresponding increase in the consumption of malt liquors was for the public good, and would lessen the evils of intemperance. But such does not appear to be the case; and on looking still further into the table I note a very great increase in the number of deaths from diseases of the heart, inflammation of the brain, apoplexy, paralysis, cirrhosis, and other affections of the liver, Bright's disease and other diseases of the kidneys, all of which have been charged to the excessive use of spirituous liquors. Evidently some fallacious conclusions have been drawn in relation to these affairs, and they need clearing up.

Considering the formidable class of diseases in the first group, depending upon epidemic, endemic, infectious, or contagious influences, the relative mortality is really quite small, and it is decreasing, owing, no doubt, to improved hygiene and sanitation, as well as to advanced methods in the treatment of these diseases. On the other hand, the diseases in the groups of the respiratory, circulatory, and nervous systems would appear to be increasing.

It will be observed that several causes of death are conspicuous on account of the larger number of deaths given in the census statistics. Some of these illustrate the more prompt attendance of physicians in the city as compared with the country, in cases

where early attendance is a desideratum. Of this class may be mentioned cholera morbus, dysentery, diarrhoea, whooping-cough, tetanus, abortion, child-birth, and the class of accidental causes. And, lastly, it would appear that a man's chances of being struck by lightning are many times greater outside of Philadelphia.

SUGGESTIONS.

From this consideration of the statistics of the mortality of Philadelphia, as exhibited in the Health Officer's Annual Reports, I am led to offer the following suggestions:

First. The basis of the mortality statistics should be the date of death, and not the week of interment.

Second. These statistics should be tabulated and classified according to the causes of death and the class of diseases, and give the percentage of each cause to total mortality, as illustrated in the table herewith presented in the appendix, and should, in addition, exhibit the mortality for each month in the same table or form.

Third. All indefinite and synonymous terms should be reduced to their rightful classification, and clinical distinctions should be carefully preserved.

Fourth. To insure accurate and useful classification, physicians should be careful to state the determining cause of death in each instance and avoid indefinite statements. The death certificate should be so worded as to elicit this information.

Fifth. The classification and tabulation should be under the immediate supervision of a physician.

Sixth. The actual daily mortality should be represented in connection with the meteorological observations. This would afford a ready means of comparing the gross mortality with the data in these tables, and serve as an index to special studies.

Seventh. In connection with the mortuary statistics, it would doubtless be of "great benefit to medical science" to publish also

the number of cases of contagious diseases reported to the health officer.

In conclusion, I believe that the medical profession, who furnish the principal data for these reports, have a right to expect that the statistics of mortality be published and presented in such shape that they will be valuable, convenient for reference, and not fallacious. The reforms suggested, and others which a practical physician and sanitarian would find necessary, would greatly conduce to the accuracy and value of these statistics.

NOTE.—Since the preparation of this paper my attention has been directed to a most valuable contribution, by Dr. J. S. Billings, entitled “Methods of Tabulating and Publishing Records of Deaths,” published in vol. xi., *Reports of the American Public Health Association*.

I refer to this well known authority as confirming the need of reform and uniformity in this matter.

DISCUSSION.

Dr. Henry Leffmann: Physicians do not take the interest they should in this matter. The mortuary statistics of a large city are often important guides to sanitary reforms. So far as Philadelphia is concerned there is a great deal to be done in the improvement of the methods of compilation. I have long been familiar with the methods of the Board of Health, and I have frequently urged certain changes, but the great difficulty in having these changes adopted is a pecuniary one. The city is not liberal in its appropriations to the Board, and its work covers a very wide field. A much graver difficulty, however, is offered by the methods of the medical profession. Many physicians are capable of making an accurate diagnosis, and of adopting a uniform nomenclature in their reports, but there are many allowed to practice medicine who can do neither the one nor the other, and they resort to the use of general terms which are either mean-

ingless or misleading. Thus “heart failure,” “old age,” “typhoid fever,” are the terms that are used very loosely in returns of deaths. I have followed up some of the deaths certified as from typhoid fever, and I have found the name used to cover up the effects of a debauch. or in cases where death occurs under debilitated conditions supervening upon disease resulting from other causes recognized or unrecognized. No mere increase of clerical force would suffice to correct this source of error. I do not see what would be gained by so radical an alteration in our system of reports as would be required to exhibit the influence of seasons upon mortality. This is rather a question of abstract science than of practical hygiene as the conditions in question are beyond our control. Practical value would attach to an arrangement that would show the influence of locality and of general circumstances in life. Our arbitrary division into wards is misleading. If four cases of typhoid fever were reported at Sixth and Poplar, for example, it would direct attention to some local condition needing remedy; but when these cases are scattered in the reports of the four different wards which meet at that point, the significance is lost. Hence I have urged the division of the city into sanitary districts. The interment, as a rule, follows the death so quickly that I see no serious objection to the making up of reports by dates of interment instead of actual dates of death. Without taking any formal action, I think it would be well if the members of this Society would personally urge upon the medical members of the Board of Health a change of method in the direction of holding physicians to a stricter responsibility for details. The place of death reported is often merely the undertaker’s office. Slovenly diagnosis I have already alluded to. It is this that makes Philadelphia suffer from the imputation of having a higher typhoid fever death-rate than other large cities. If, however, we add the deaths from typhoid

fever and from malaria, and from other diseases liable to be mistaken for typhoid fever, we will find that in the aggregate for all these Philadelphia is no worse than New York, or Baltimore, or Boston. But the tendency of medical men to report as typhoid fever anything that is at all like it, unduly swells that list and diminishes that of the other affections. We have in reality no greater zymotic death-rate than have other large cities.

Dr. Dulles: This subject is one of too much importance to be hastily dismissed. I have had practical experience of the difficulties attending study of the mortality statistics of Philadelphia, but I have never heard them put together in such shape in this paper. I agree with the reader that the published tables should represent the deaths of the period named, and not the interments. Undertakers are irregular in their returns, and the report may appear a week or two later than the death. Dr. Leffmann has intimated that the seasonal relations are rather matters of scientific curiosity than of practical importance, as climatic conditions are not to be altered by human beings. But if these conditions are not to be altered they may be prepared for, and the mortality tables may put us on our guard by showing what conditions are accompanied by certain diseases. It might not be amiss to imitate the custom of the French Academy when matters of like public interest are brought before it, and appoint a commission to study the subjects in connection with this paper, and to present a report to the Society with such recommendations as the facts may call for. Especially should it take into consideration the questions of time, phraseology, and accuracy of diagnosis. No doubt a great deal of confusion arises from the carelessness of physicians. This explains the result, but does not excuse it. If this Society were to take hold of the matter with energy, it might be possible to get much better reports than we now have.

BOOKS AND PERIODICALS.

PHARMACY AND THERAPEUTICS.

For the Use of Students.

BY

CUTHBERT BOWEN,

M.D., B.A.,

Editor of Notes on Practice.

Philadelphia and London.
F. A. Davis, Publisher.
1888. Price \$1.40. 12 mo.
cloth pp. 366.

The author aims to furnish in this volume such a *resume* of materia medica, pharmacy and therapeutics as will enable students to prepare for final examination in the medical colleges.

The first chapter is devoted to an attempt

at explaining the best methods of study. The proper form in prescription writing; the manner of designating quantities in the English, and the metrical systems; the officinal preparation and dose of each article of the materia medica are given in terms sufficiently clear and brief to make the work a source of convenient reference for the student. Of all the manuals on the subject of pharmacology this is certainly the most useful.

ELECTRICITY IN THE DISEASES OF WOMEN.

With special reference to the application of strong currents.

BY

G. BETTON MASSEY,

M.D.,

Physician to the Nervous Department of Howard Hospital, etc.

Philadelphia and London,
F. A. Davis, Publisher.
1889. Price \$1.50. 12 mo.
cloth pp. 210.

The author aims to produce a scientific treatise on the electrical treatment of the diseases of women, somewhat in the nature of a mirror of his daily work. "While the experience of others, particularly of Apostoli, Engelman, and Laphorn Smith, has been utilized as a guide and mentor, it is not forgotten that a

scientific investigation takes nothing upon hearsay evidence, and that the profession demands proofs rather than theories."

The text is illustrated with wood-cuts, and by clinical records. What the value of those "proofs" may be, which the author says the profession demands, and which he attempts to furnish the reader must judge.

The description of apparatus is lucid, whilst the article on fibroids must be regarded the most attractive feature of the work. The author's style is such as to make his book readable, even though his subject might otherwise prove uninviting.

**PATHOLOGY AND
TREATMENT OF
DISPLACEMENTS
OF THE
UTERUS.**

BY

DR. B. S. SCHULTZE,

*Professor of Gynecology,
Director of the Lying-in
Institution, and of the
Gynecological Clinic, in
Jena. Translated by
Jameson J. Macan, M.A.;
M.R.C.S., Eng. etc. and
edited by Arthur V.
Macan, M.B., M.Ch.,
etc., Master of the Ro-
tunda Hospital, Dublin.
With one hundred and
twenty illustrations.*

New York: D. Appleton &
Co., 1888.

The literature of uterine displacements has multiplied amazingly within the last decade. The pessary-massage, constitutional medication, and finally laparotomy for various organic changes of position of the uterus have each drawn professional attention to the importance of rectifying the malpositions of an organ the normal condition of which seems absolutely necessary

to the good health of womankind. Schultze seems to have opened up a new field in the study of malpositions of the uterus upon purely anatomical grounds, and, no doubt aroused new interest in the minds of those who had followed Hodge, Graily, Hewett, Emmet, and Sinus into the details of uncertainty. When Schultze's work has been read and understood more widely in this country, the Symington Browns', shall be less numerous, and gentle woman shall be well rid of the great dangers to longevity. Every American physician should read this work.

After discussing the subject of herniæ uteri the author summarizes as follows: "Hernia uteri is generally inguinal, rarely crural; herniæ of the uterus through the ischiata or oval foramina, though often cited, have never been seen. The radical operation for hernia is indicated; in hernia of the gravid uterus, artificial abortion or Porro's operation.

CORRESPONDENCE AND SOCIETIES.

MEDICAL PARIS.

BY

MR. ERNEST HART,

OF LONDON.

*Editor of the British Medi-
cal Journal.*

Hospital of St. Louis: Der-
matology; M. Vidal; M.
Besnier; Tricophytic af-
fections; Fournier's syph-
ilographic studies; M.
Barretta's Casts; Ecole
des Teigneux; M. Hardy's
Treatment of Scabies.

If it is to the Sal-
pêtrière that the stu-
dent of neuropath-
ology—the curious
rare forms of hypnot-
ism and hysteria
major—and the *con-
noisseurs* of diagnostic
acumen and highly
developed clinical
teaching will first di-
rect their steps, it is,

on the other hand, to the Hôpital St. Louis, situated in an opposite quarter of Paris, that the devotee of dermatology and the student of syphilography will make his first visit. He finds there a great mass of material, a developed system of examination and teaching, special museums and methods of treatment, many of which have originated on the spot, and are applied with precision and success.

The Hôpital St. Louis is situated on the left bank of St. Martin's Canal, and is now since the ancient Hôtel Dieu has disappeared, the oldest hospital of Paris. It was founded in 1607 by Henri Quatre, and completed in 1612 under Louis Treize. When built it was outside the walls of the old city, and served for patients suffering from plague who, until then, had been treated, not without peril, at the Hôtel Dieu. The Hôpital St. Louis was thus for two centuries a sort of annexe to the Hôtel Dieu, and under the same administration. Sometimes filled with patients and sometimes completely closed, it was only after the great fire of 1672, which devoured half the Hôtel Dieu, that it was definitely kept open in order to supplement the requirements of the Hôtel Dieu, which had become insufficient for the purpose. At first it was chiefly occupied by patients suffering from chronic affections not requiring frequent visits, while patients suffering from acute maladies remained in the centre of

the city. Thus, at the beginning of the century, the St. Louis contained especially patients suffering from cancer, scrofula, ulcers, lupus and syphilis. These were the patients whom Alibert and Bielt found there when they were charged with the service of this hospital at the commencement of the century. Needless to say what considerable results they drew from their scientific study, and how, gradually, under the impulse of these distinguished physicians—soon followed by Lugol, Cazenave, Devergie, Gibert, Bazin, Hillairet (to speak only of those who are departed), St. Louis became a hospital almost exclusively devoted (so far as its medical wards are concerned) to diseases of the skin and syphilitic diseases.

The actual establishment contains 1,043 beds, of which 625 are reserved for dermatological and syphilographic cases; 242 beds are to be found in the surgical wards, of which I shall speak later on. There is a service of accouchements forming a separate department, and containing 28 beds; and moreover, in a separate barrack, erected in the grounds, provision is made for a temporary service in case of epidemics or special pressure. The engraving, for which I am indebted to Dr. Feulard, the *Chef de Clinique* of the St. Louis, is taken from his history of the Hôpital St. Louis, published in the *Annales de Dermatologie et de Syphilographie*, 1885. It shows the hospital as it existed in the 17th century. It has undergone since many changes and extensions, and a careful series of plans of its present installation are given in the current number of the *British Journal of Dermatology*, in a paper by Mr. Louis Wickham. It will be seen that it is a very picturesque old building covering a great extent of ground supplied with open spaces and courts; and although of ancient construction, the pavilion system on which it is erected, and the free cross ventilation thus afforded, together with the absence of any agglomeration of patients in any one pavilion, supply many

of the first requirements of sanitation. The accessory establishments, including the out-patient departments, the baths, arrangements for washing the linen, etc., are on a correspondingly great scale and are well worth administrative study, but I have not here space to do more than indicate their importance. Nor do I desire to dwell on some obvious shortcomings. The hydrotherapeutic establishment is very extensive, well mounted and valuable; indeed indispensable to so great a collection of patients suffering from skin diseases; its details are of practical interest for therapeutical purposes.

The medical wards are divided under the charge of six physicians, elected by general *concours* of the hospital physicians of Paris. At the present moment they are in the order of seniority, Drs. Vidal, Ernest Besnier, Alfred Fournier, Hallopeau, Quinquaud and Tenneson. Each of these *chefs de service* controls a series of male and female wards. The number of beds reserved for men is usually greater than those for women. To each physician is attached a house-physician and several clinical clerks and dressers. Each of them has out-patient consultation days, from which his ward beds are filled, and at which on each day from 500 to 600 patients, coming from the outside, are seen and attended to.

The service of Professor Fournier is devoted to the *clinique* of dermatology and syphilography of the Faculty of Medicine. It therefore possesses also a *chef de clinique*, who is nominated after *concoirs* by the faculty.

1. The service of Dr. Vidal (Membre de l'Académie de Médecine) comprises the wards Alibert (women) and Devergie (men) and the Gabrielle pavilion containing rooms for paying male patients. The outdoor patients of M. Vidal come on Tuesday. On the following morning he holds a clinical conference on the cases of the patients who have been selected to enter his wards. Thursday he devotes to the surgical treat-

ment of skin affections, such as lupus, chronic acne, keloid, etc. He is one of the most active promoters of the method of linear scarification in the treatment of lupus, and every week there may be seen in this service numerous patients who come from without to be treated by this method.

2. M. Besnier has two wards situated on the ground floor of the first building on the right and left of the corridor on entering—Gibert ward (women), 32 beds; and Cazenave ward (men), 72 beds. To Cazenave ward is attached a clinical laboratory, in which M. Besnier carries on his teaching, dermatological operations, and out-patient consultations. Dermatological operations are performed on Tuesdays for in-patients and out-patients. After having practiced for several years linear scarifications, of which he developed and improved the manual proceeding, M. Besnier now usually has recourse to galvano-cautery in virtue of the greater rapidity of action of this method, absence of bleeding, and avoidance of auto-inoculation in lupus, which he considers as being in all cases a condition of local tuberculosis. His out-patient consultation on Wednesdays is devoted to dermatophytic and trichophytic cases, including ringworm, which is very abundant in Paris; favus has become rare there, and is now seen chiefly in patients coming from the provinces or from other parts of the Continent. In the treatment of trichophytic affections of the scalp and beard M. Besnier cuts the hair close to the skin with scissors, proscribing the razor, which is apt to cause auto-inoculation. The scalp is thus kept shorn during the whole duration of the disease, which facilitates both treatment and surveillance. The diseased parts are separated from the healthy parts by a zone of epilation carried into the region of the healthy hair. The same general measures are taken for alopecia areata. Favus alone he considers the suitable sphere for practicing epilation of the diseased hair; the head is, moreover, kept in the same

state as for the preceding affections, and a zone of healthy hair is epilated and is always carefully maintained around the diseased part. These are the general measures; the details of treatment varying in each particular case. M. Besnier (Membre de l'Académie de Médecine) is one of the directors of the *Annales de Dermatologie et Syphiligraphie*, and besides other publications he took part in editing and annotating a translation of Kaposi's *Lectures on Skin Diseases*; in the notes the doctrine of the Paris school and the school of Vienna are compared.

3. Professor Fournier represents a part of the official teaching of the faculty—that is to say, he is charged with the *clinique* of cutaneous and syphilitic diseases of the Faculty of Paris, a chair which was created in 1880. Every week during the scholastic year Professor Fournier gives two lectures; that on Tuesday is devoted to clinical teaching and presentation of patients; the Friday lecture is delivered in the amphitheatre constructed at the hospital by the faculty, and treats in professorial fashion of a subject in cutaneous or venereal pathology. A certain number of these lectures are each year reserved for study of some special subject, many being combined in published volumes have become the origin of the works of M. Fournier, of which it will suffice to recall one or two titles: *La Syphilis du Cerveau*, 1879; *Syphilis et Mariage*, 1880; *De l'Ataxie Locomotrice d'Origine Syphilitique*, 1882; *Leçons sur la Période Préataxique du Tabes d'Origine Syphilitique*, 1885; *La Syphilis Héritaire Tardive*, 1886. Before taking over the service at the Hôpital St. Louis, M. Fournier had, as physician to the Lourcine, published his lectures on syphilis more especially in women (second edition, 1881), of which the third edition is now in preparation. At the present moment his lectures bear especially on syphilis during conception. To the *clinique* of the faculty are attached in addition to the ordinary staff, a *chef de clinique*, at present Dr. Feulark, whose exertions are recognized by

all who know the present work at St. Louis, and to whom I am indebted for facilitating this study, and furnishing me with precise information; Dr. Darrier, head of the laboratory for microscopic studies; and Dr. Pouchet, chief of the laboratory for chemical studies. The wards attached to the service of the Faculty are Henri Quatre (women) and St. Louis (men).

4. Dr. Hallopeau has his wards in the Bazin and Lugol pavilions, which are situated to the north of the principal building. The Lugol has 29 female beds, and the Bazin 66 male beds. He has also charge of children suffering from ringworm, who are admitted into hospital—40 beds in all, 20 for each sex. The outdoor consultations of Dr. Hallopeau are held on Monday morning, and are the most numerous attended of all the week. On Tuesday, M. Hallopeau holds a clinical conference on patients selected for admission from among those who presented themselves at his consultation on the previous day. Saturday is devoted to examination and treatment of cases of ringworm. M. Hallopeau is *agrégé* of the Faculty of Medicine, and the author of an elementary treatise on general pathology, of which the third edition is in course of preparation. Among the dermatological studies which he has published since becoming physician at St. Louis are papers on Atrophic Lichen Planus, Fungoid Mycosis, Syphilis of Abnormal Evolution, Syphilitic Angina Pectoris, the Suppurative Form of Tubercular Lupus, and the Treatment of Ringworm.

5. Dr. Quinquaud, Professor Agrégé of the Faculty, has the Lorry and Bichat wards. He lectures every Wednesday in summer. Among the published memoirs are papers on Pemphigus, 1879 (Soc. Méd. des Hôp.), Tinea Tonsurans, and Alopecia Areata, 1879 (Soc. of Biology), Hæmatology, a Study of Clinical Affections, 1880 (*Progrès Médical*). M. Quinquaud enjoys also the advantage of a spacious laboratory, newly constructed, and endowed by a special sub-

vention of the Municipal Council of Paris. This laboratory is destined for the study of physiology, histology, and bacteriology, applied to diseases of the skin.

6. Dr. Tennesson has just been appointed to the hospital. He devotes Saturday mornings to gynæcological examinations, and Monday to affections of the skin.

Each of the six physicians is charged in turn with the outdoor department of the hospital. This consultation takes place in the morning, from half-past eight to eleven. More than 200 patients, male and female, pass through the hands of the physician in this time, and receive medicine or cards for the bathing establishment, or for the treatment of each according to need.

So remarkable are the effects of the Paris system of centralization at this huge dermatological institution that it would be hardly possible to find elsewhere such extensive clinical, therapeutical resources for study. Physicians and pupils of every nationality have free access to the wards, consultations, lectures, and clinical visits, without being required to fulfill any formality; nor are any fees payable or paid by them. It is only just to say that the unwearied efforts and the public spirit shown by the physicians in completing their methods of instruction are not always seconded by the liberality which they have a right to expect from the central authorities.

An excellent institution at St. Louis is the general consultation of Thursday at nine o'clock, at which all the physicians take part in presenting to each other, and discussing before a numerous auditory in the amphitheatre, the difficult or rare cases of the week, or those which present special elements for study.

St. Louis also contains, as I have indicated, surgical wards under the direction of three surgeons, Drs. Péau, Le Dentu, and J. Lucas-Championnière. Of this surgical service I shall hope to speak in a later letter, in conjunction with other surgical observations; so, also, of the service of accouch-

ment, which is under the direction of Dr. Porak.

One of the leading attractions of this hospital is its celebrated Museum of models of skin-disease, which is to be found on the first floor of a pavilion recently constructed, the ground floor of which is occupied by the rooms for the out-patient consultations. The museum is a large rectangular building, receiving light from the ceiling and from side windows, and filled with cases containing the models. The oldest of these date from the year 1869. There are now more than 1,400 pieces belonging to the special collection of the hospital, and due to the peculiar talent of M. Baretta, who is well known in this country from the number of works which he contributed to the Erasmus Wilson Museum. The "discovery," so to speak, by Dr. Lailler, one of the physicians to the hospital—M. Barretta, who had never previously executed any anatomical models, has attained singular perfection in his work. These models are made of a composition of which the artist keeps the secret. They are very faithful and fresh in color, and give almost the illusion of Nature, reproducing the most curious cases which have occurred in succession in the wards of the Hôpital St. Louis. This collection furnishes abundant material for clinical teaching and for the study of skin and syphilitic diseases, of which it offers at all times to students the most remarkable types. In this museum, which furnishes a mass of material necessary to illustrate description, will be held from the 5th to the 10th August next the International Congress of Dermatology and Syphilography, which is in course of organization by the physicians of the hospitals St. Louis, Lourcine and Midi, and of the faculties of Lyons and Lille, under the presidency of Dr. Ricord and Professor Hardy. Besides 1,400 specimens in the general collection of the museum, it contains, also, the private collection of Professor Fournier, rich in syphilitic types, and comprising more than 400 pieces, modelled

by Baretta and Jumelin; that of Professor Parrot, especially concerning infantile syphilis; and, finally, the important surgical collection of Dr. Péau, modelled by Baretta, and including 800 specimens.

To the museum is annexed a library, which has been created during the last year and which already counts 3,000 volumes, for the most part donations. It receives all the journals of dermatology published, and is rapidly becoming a useful and indispensable auxiliary of the museum, by the importance of its collection of books on dermatology and syphilography. This library is placed under the direction of Dr. Henry Feulard, who is occupying himself with preparing a catalogue of the museum. Dr. Feulard is Secretary of the Organizing Committee of the Congress, and expects to complete before the meeting of the Congress the catalogue of the collections in the museum, and a history of the Hôpital St. Louis, on which he has been working for some time.

This rapid review of the principal services of this remarkable hospital would be incomplete if I were not to mention a recent addition due to Dr. Lailler; a school for children suffering from ringworm. The opportunities at disposal for treating such children in the wards and the hospital being insufficient—and on the other hand children suffering from ringworm being excluded from schools—the administration of the Assistance Publique of Paris has opened, in some buildings attached to the hospital, a school in which these children are at the same time medically cared for and taught. They come every morning and return home in the evening. This valuable service has been working for two years, and it has proved so useful that the question is now being entertained of establishing another similar school in another part of Paris; Dr. Quinquaud is in charge of it.

I must add also a note of the treatment of itch, instituted at the St. Louis, under the direction of M. Hardy, for this is one of the characteristic features of the place, and has

become classic. M. Hardy's views as described by himself are that whatever the form of medication chosen for the cure of itch it is necessary that rough friction should be used in order thoroughly to open the fissures, and to make the parasitic agents reach the acarus, and then it is further necessary to carry out general friction in order to reach the parasite in whatever regions it may occupy. These precautions are indispensable; by adopting them prompt and certain treatment has been obtained for itch. To favour rupture of the channels, it is found useful, before employing parasiticide lotions or frictions, to rub the skin thoroughly with soap, and to make the patient take a bath, the effect of which is to soften the epidermis, and to make the fissures gape. By employing rough and general frictions, Bazin succeeded in curing itch in forty-eight hours, by four frictions, and even in twenty-four hours, with two frictions. Hardy has further simplified these proceedings, and has arrived at a rapid cure, which leaves little to be desired. The patient is first of all subjected to friction with black soap and water for about twenty minutes. Then he is placed in a warm bath for an hour, during which he continues to rub himself and to soap himself. On coming out of the bath he is again rubbed over the whole surface of the body for twenty minutes, with a modified formula of Helmerich's ointment. This treatment lasts for an hour and forty minutes. Rubbing with black soap and the bath aim at cleansing the skin, softening the epidermis, and opening the fissures, and thus preparing for the action of the ointment which is intended to destroy the acari. After this treatment the patients dress themselves without drying the skin, and are advised not to remove the ointment for at least four or five hours. This prolonged contact is intended to ensure the destruction of the acari, and especially to reach those which may have wandered on to the clothing; the individual who is thus covered with sulphuroalkaline ointment is a

veritable fumigating machine, exhaling sulphurous vapours. Nevertheless, to ensure cure and to prevent the itch from being reproduced by the acari remaining in the clothing, it is better to pass through the vapour of sulphur the clothing which has been worn from the beginning of the disease, and completely to change the linen and sheets, and to burn any gloves which may have been worn.

In some countries, and especially in Belgium, at the same time that the patients are thus treated the clothing is purified by being placed in a disinfecting apparatus heated up to 100° C. This high temperature kills animal parasites by expanding the water contained in their organism. At St. Louis the treatment is carried out by collecting all patients of the same sex in a vast bath-room, and there under direction of a male or female attendant, rubbing is carried out by placing them in a line, one behind the other, so that each rubs himself on the anterior surface of the body, and rubs also the posterior surface of the patient placed in front of him. By the operation, which lasts for an hour and forty minutes, the acari and their eggs are destroyed; to complete the cure some further baths are prescribed.

This treatment was instituted in 1852, and it has been applied up to the present time to about 100,000 patients. It gives about fifty-nine cures in every sixty patients.

I cannot allow myself to enter into further details, but I can hardly abbreviate more closely in speaking of a hospital which is assuredly the most extensive of those which exist in the centre of Paris, and one of the most interesting alike by reason of its antiquity and its architectural beauty, as well as from the speciality to which it is devoted; the renown of the physicians who have successively served it and of their works; and in view of the copious instruction offered by its hundreds of patients and its unique museum.

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SIR MORELL
McKENZIE
AND HIS
ASSAILANTS.

Several months ago
Sir Morell McKenzie
resigned his member-
ship in that ancient
body, the Royal Col-

lege of Physicians, of London. At a recent meeting of the executive council, resolutions of censure were adopted concerning the question of good taste embodied in the publication entitled "The Fatal Illness of Frederick the Noble," and especially in that part which contained fac similes of the letters of the late Frederick expressing confidence in the skill of McKenzie. Now, all this may sound very well to persons not already familiar with the widely published calumnies upon McKenzie; but the right of self-defense is not questioned in this country. The medical profession in the United States should not forget, in forming an opinion of McKenzie's conduct and in estimating the force of the action of the Royal College of Physicians, that Sir Morell had been violently assailed in the medical and secular press throughout the Prussian empire, for alleged professional ignorance and personal meanness; that all this had been widely copied and commented upon by the press of the entire civilized world, and that some sort of personal response was absolutely necessary. McKenzie was pressed in the most urgent

manner for an expression of his feelings toward those with whom he had but recently been associated at the bedside of the late Emperor, and who had assailed him most vehemently. As to the Royal College, its action is expressed in the resolutions of a committee, which has assumed to act upon a matter in no way within its jurisdiction. It has done more, it has assumed to interpret an ethical principle and stamp it with the seal of Royalty. Well, it ought to be universally known that the Royal College contains neither Royalty within its membership, nor any approach to eminent respectability in the scientific attainments exhibited in its transactions. It does sometimes quarrel with the Society of Apothecaries about the granting of license to non-graduates to practice medicine, but it is chiefly conspicuous for the number of Grannies embraced in its membership. The very nature of the reply of the German assailants, to Sir Morell McKenzie's publication, exhibits the truth of his statements and the justice of his position. Imperial sanction is wholly unnecessary in the support of scientific truth or the right to defend one's self against calumnies before the tribunal chosen by the calumniator. McKenzie made statements, the truth or falsity of which might easily be shown by certain court records in the custody of his assailants, yet those records remain sealed in the Imperial archives at Berlin. The attempt to raise any merely ethical question in reply, is a weak subterfuge, in support of which some of the medical journals have become just objects of derision.

PROFESSOR
J. C. DALTON.

Prof. John Call
Dalton. M. D., L. L.
D., of the College of

Physicians and Surgeons of New York, died Febreary 12, 1889, of kidney disease. He was born at Chelmsford, Mass., 1825, and graduated at Harvard, receiving the degree in medicine, in 1847.

It is singular so many eminently intellectual men die of renal disease.

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The Publishers' Department of PROGRESS is designed to afford the Business Editor proper space, in the regular order of our system of classification of the text, for such notices and comments as he may feel inclined to make of meritorious articles, and such items of news as may seem to him best calculated to interest the readers.

No house will, therefore, be able to purchase space in this department.

VOMITING OF PREGNANCY.	Dr. Popp (<i>Pester med. Presse</i> , No. 40, 1888) reports having achieved considerable success with Ingluvin in the vomiting of pregnancy. Having a very obstinate case, upon which he had exhausted the entire resources of the pharmacopœia, he administered three times daily, one-half hour before mealtime, eight grains of Ingluvin, and directly afterward two tablespoonfuls of one per cent. hydrochloric acid solution. An improvement was observed after a few doses had been taken, and a cure effected after the treatment had been continued for three weeks.— <i>Deutsche med. Wochenschrift</i> , January 17, 1889.
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APERIENT SUPPOSITORIES.	For a number of years glycerin has been successfully used in the form of enemata, to provoke alvine evacuations. Owing to the physical and chemical properties of this article, many difficulties have been encountered in the endeavor to present it in a suitable and convenient form which would dispense with injection apparatus. While it may be conveniently administered in rectal capsules its enclosure in gelatin is not permanent, as capsules containing it are rapidly attacked and become distorted, owing to the hygroscopic character of the glycerin and its
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solvent action on the gelatin, the greater part of the glycerin usually escaping. Neither does it appear possible to incorporate gelatin with the glycerin and produce a suppository having any activity, as such a composition necessarily requires a certain amount of water. This admixture of water interferes decidedly with the action of the glycerin. Whatever theories may be indulged in as to the rationale of its action, the best effects are obtained when only a minute quantity of water is present, in other words when the glycerin is nearly anhydrous.

The effect would appear to be due to some direct chemical action of the glycerin on the rectal mucous membrane, possibly a combined stimulant and mechanical effect, the latter due to abstraction of water, or rather excitation of a watery discharge. Be that as it may, it produces in some way an active reflex intestinal peristalsis. The remedy has been used in the most varied forms of intestinal and gastric troubles and is characterized by extreme promptness of action varying from a few minutes to half an hour, usually producing an evacuation when the suppository is only partially dissolved.

The conclusion arrived at, from an extensive employment, is, that their action while not infallible, is constant and free from danger. Messrs. Parke, Davis & Co., of Detroit, prepare suppositories containing 95 per cent. of glycerin in a form and size adapted for administration to both infants and adults.

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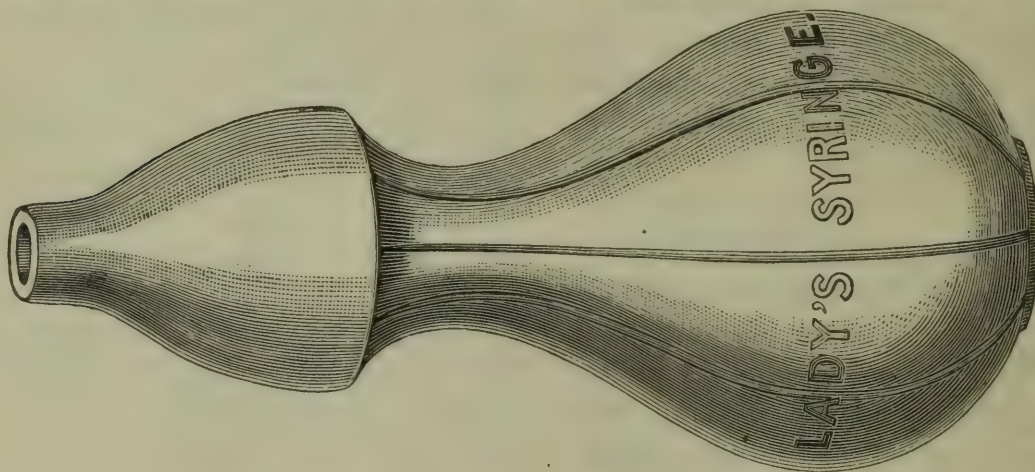
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"I HOLD EVERY MAN A DEBTOR TO HIS PROFESSION; FROM THE WHICH AS MEN OF COURSE DO SEEK TO RECEIVE COUN-
TENANCE AND PROFIT, SO OUGHT THEY OF DUTY TO ENDEAVOUR THEMSELVES, BY WAY OF AMENDS, TO BE A HELP AND
ORNAMENT THEREUNTO. THIS IS PERFORMED, IN SOME DEGREE, BY THE HONEST AND LIBERAL PRACTICE OF A PROFES-
SION; WHEN MEN SHALL CARRY A RESPECT NOT TO DESCEND INTO ANY COURSE THAT IS CORRUPT AND UNWORTHY THEREOF,
AND PRESERVE THEMSELVES FREE FROM THE ABUSES WHEREWITH THE SAME PROFESSION IS NOTED TO BE INFECTED; BUT
MUCH MORE IS THIS PERFORMED, IF A MAN BE ABLE TO VISIT AND STRENGTHEN THE ROOTS AND FOUNDATION OF THE
SCIENCE ITSELF; THEREBY NOT ONLY GRACING IT IN REPUTATION AND DIGNITY, BUT ALSO AMPLIFYING IT IN PROFESSION
AND SUBSTANCE."—BACON.

VOL. III.

LOUISVILLE, KY., APRIL, 1889.

No. 10.

GENERAL MEDICINE.

ARSENICAL

POISONING.

*A Case Simulating Closely
in its Characteristics
those of Poisoning by this
Agent.*

BY

THOMAS B. GREENLEY,

M. D.,

WEST POINT, KY.

Read to the Hardin County
Medical Society, March
7, 1889.

On the 10th of Jan-
uary, 1889, in the
evening, I was called
to see George Stone,
aged twenty-five years,
affected with nausea
and vomiting. The
matters emitted from
the stomach were very
acid and mixed with
bile. He was quite
thirsty and drank

water frequently. He complained of a pain
in cardiac region of the stomach, and was
inclined to go to stool frequently, but dis-
charged but little from the bowels. He
charged his disordered stomach to a mess of
pork eaten that day.

I first gave him a few doses of bromide
of sodium with a view to both neutralize the
acidity and quiet the stomach.

This, however, was soon vomited and the
dose repeated, which was also soon ejected.
I then gave him a dose of bromide-caffeine,
hoping it might allay the nausea and vomit-
ing. This was retained.

January 11th—Still some nausea and oc-
casional vomiting. Repeated bromo-caf-
feine, which, with large spoonful doses of
hot water, and milk with lime water finally
quieted the stomach. At night on account
of great restlessness and some uneasiness in
stomach gave him hypodermic injection of
morphia and atropia to procure rest and

support the heart, which was acting very
frequently and feebly. He had no ab-
normal heat. I omitted to say when I first
saw him his heart was acting rapidly—140
per minute, but with small force.

On account of frequent disposition to
stool, without passing but little, I gave him
a soap-suds enema. Urine almost sup-
pressed.

January 12th—Better this morning.
Stomach tolerably quiet, with slight nausea.
Continued milk with lime water, and ex-
cluded solid food; also gave him an oc-
casional dose of bromide sodium. Heart
not so frequent and slightly better volume.
No fever, and not so much uneasiness at
stomach.

Evening, 5 o'clock—Quite cheerful and
sitting up in chair by fire, and expressed
himself as feeling much better. Told him,
as he seemed to be relieved, I would not
call again unless he sent for me.

9 o'clock—Sent in a hurry for me, mes-
senger saying the patient was much worse.
Found him in great agony—rolling over the
bed, jumping up and down frequently, and
crying with burning pain from the throat to
the stomach, and calling for water every
few minutes. Nausea and vomiting had
returned with great intensity. Owing to
the great pain and restlessness I gave him a
hypodermic injection of morphia, gr. ss.;
applied mustard over the stomach, and per-
orally administered bromide sodium and a
tablespoonful of hot water at short intervals.
Besides, he would have frequent drinks of

cold water. I remained with him until 3 o'clock in the morning, when he became somewhat more quiet. His pulse was rapid and feeble, but he had no abnormal heat. He now had frequent discharges from the bowels in small quantities. Kidneys still torpid, but acting slightly.

When I returned and found my patient in such terrible agony, I asked him if he had taken anything in the way of medicine of his own accord and without the nurse having given it to him? He could not recollect that he had. Being so firmly impressed from the symptoms that he was laboring under arsenic poisoning, and knowing there was arsenic about the house, I called the nurse (lady of the house) aside and asked her if it was possible that the patient could have by mistake or accident gotten any of the arsenic she was using against rats? She said she did not think it was possible, as she had used it all.

The reason I thought he had taken some by mistake I had left powders of bromide sodium, which looks something like arsenious acid.

January 13th, morning—Seemed more quiet to-day, although nausea and occasional vomiting continued. Pulse still feeble. Hoping he might retain some medicine on stomach, I gave him as a heart supporter F. extract digitalis and nuxvomica at intervals of two or three hours as the stomach might tolerate them.

Evening—About the same. No fever. Remained with him till 12 o'clock. Hypodermic injection morphia to procure quietude. Internally, milk with lime water and occasional dose of bromide soda.

January 14th—Stomach seemed to be more quiet this morning, and had retained some milk and lime water. Pulse weak; has no fever. Did not sleep much last night, and in fact has slept but little since he was first taken sick. Continued the digitalis and nuxvomica, which he has retained in part.

1 o'clock—Seemed to be more quiet; had

retained most of the medicine to-day, and the heart seemed to have responded to its influence, as his extremities were warm and pulse volume better. No fever.

6 o'clock—On my visit this morning was astonished to find my patient cold and pulseless, with great restlessness. Increased pain in stomach, with nausea and vomiting. Used hypodermic injection of digitalis and nuxvomica over the heart; applied mustard to extremities and hot irons to his feet; also injected whisky into the rectum. There being no reaction in an hour I repeated the injection over the heart with addition of morphia, and also applied cloths wrung out of hot water, over the heart; repeated every few minutes. I remained with him until 12 o'clock when all hope of reaction had vanished. He retained consciousness up to that time, but could not communicate distinctly. He was very restless until the last, it being impossible to keep the bed-clothes on him.

The friends of the deceased, after consultation, concluded to have him disinterred, in order to determine, if possible, by post-mortem examination, the cause of death, and agreed on Friday, the 25th of January, as the time, being ten days after interment. The writer, in conjunction with Drs. J. C. Lewis and J. Reesor, of this county, made the autopsy. We examined the stomach and esophagus, and discovered evidences of congestion and inflammation. The cardiac extremity of the stomach presented patches of engorgement as if produced by some irritant. In fact the peritoneal surface appeared as if it had been partially cooked, showing a considerable number of vesicles; there was also a corrugated condition of the muscular coat, as if macerated in a solution of some astringent mineral substance. The esophagus was more or less corrugated, and was particularly so at and near its entrance into the stomach.

At the request of friends of deceased, I took these organs with a small portion of the liver to Prof. J. L. Howe, scientist of the

Polytechnic Society of Louisville, for analysis, and here appeared his report:

POLYTECHNIC SOCIETY,
OF KENTUCKY,
LOUISVILLE, February 28, 1889. }

Analysis of stomach and portion of liver of a man supposed to be poisoned by arsenic. Stomach and liver furnished by Dr. T. B. Greenley, of West Point, Ky.

Amount of arsenic found in stomach, weighed as arsenious sulphide, 0.2054 grams, equivalent to arsenious oxide (white arsenic) 0.1653 grams.

Amount of arsenic found in liver, weighed as arsenious sulphide, 0.0250 grams, equivalent to arsenious oxide 0.0201 grams. Or arsenic recovered from the stomach, 2.55 grains; arsenic recovered from the portion of the liver, 0.31 grains.

[Signed] JAS. LEWIS HOWE,
Scientist to Polytechnic Society, Louisville, Ky.

REMARKS.	The portion of the liver taken to Dr. Howe did not constitute more than one-tenth of the volume of that organ; consequently at the same ratio, if the whole of it had been subjected to analysis, it would have furnished over grs. jii of arsenious oxide; which, added to that obtained from the stomach, would have amounted to nearly grs. vj of white arsenic. This amount, of course, is sufficient to destroy the life of a man, to say nothing of that washed out of the stomach by vomiting, which, no doubt, was a considerable quantity.
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In studying the history of the case, I am almost forced to the conclusion that during the time he was sick, including the outset of the disease, he got arsenic three different times; first, in the outset of the attack; secondly, on Saturday evening after he was so peart in the afternoon; and, thirdly, during the afternoon on Monday after I saw him at 1 o'clock, when he seemed to be considerably better, and so expressed himself. I did not suspect in the outset of the disease

that he had gotten arsenic; and at the two subsequent periods that I was convinced of it, it was too late when I saw him, to use an antidote, as at each time he had been vomiting every few minutes and drinking a great deal of water. Deeming most of the poison have been washed out of the stomach, I regarded it useless to exhibit the antidote.

Now, as to how he got the arsenic, is shrouded in a mystery, and perhaps will always remain so. Evidently he did not take it voluntarily, as he was anxious to get well. The way I knew there was arsenic about the house, the son of the lady called at my office for some to give to rats about the time the patient took sick, but I did not think of his having gotten any of it as before remarked, until Saturday night, when the symptoms became so pronounced.

There was, as far as I could understand, no motive on the part of the lady of the house to get rid of the patient, but on the other hand as far as I did know, deemed him to be her best friend.

COCAINE.	Cocaine in the extraction of teeth has excited much attention. The editor of PROGRESS, having had some recent experience in this matter, takes this occasion to say that cocaine injected into the gums is so much more painful than the extraction of any tooth can possibly be, that he felt, on a recent occasion when obliged to give up a molar, that the process of extraction, as compared with the injection of cocaine, produced the most delightful sense of relief; and he most earnestly maintains, therefore, that if cocaine is to be used to mitigate the pain of extracting a tooth, it should not be injected into the gum.
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Hoping no reader of PROGRESS may have occasion to verify this statement, the editor is pleased to say, the next time the fates decree the extraction of one of his molars, it shall be done without the hypodermic injection of cocaine.

GENERAL SURGERY.

MALIGNANT
TUMOR OF THE
KIDNEY AND
SUPRA-RENAL
CAPSULE.

BY

J. H. GROVE,

M. D.,

Read to the Philadelphia
County Medical Society.
March 27, 1889.

The specimen which I desire to present was removed from the body of a woman aged forty years, married, had one child. Her father died at the age of forty-four years, of disease of the heart, resulting in dropsy. Her mother is living, is sixty-seven years

old, and in fair health. A sister died of phthisis, and a brother died with dropsy, the cause of which I do not know.

On February 15, 1888, I removed from her a tumor situated in the right axilla, extending down to the ribs, under the pectoralis muscles, and up to the shoulder-joint. About ten or a dozen indurated glands were removed from the surrounding region. The tumor examined microscopically proved to be a melanotic sarcoma. She made a good recovery, and there was subsequently no indication at any time of a return of the disease in that region, or at any point on that side of the body. During the following summer she enjoyed fair health: and during the month of September, while at the seashore, she recovered her accustomed vigor and gained rapidly in flesh and weight. But about October 1st, while still at the seashore, she began to complain of pain in the loins and left side. About this time she went to the interior of the State. For several weeks after this she suffered most of the time excruciating pain in the left side, about the region of the spleen and left kidney, with frequent vomiting, loss of appetite, and consequent emaciation.

On December 27th, she returned to this city, and upon the same day was admitted into the St. Agnes's Hospital. She was then a marked cachectic in appearance, and emaciated, weighing only ninety-eight

pounds. She complained of dull pain in the loins, extending into the left hip; occasional attacks of vomiting; no appetite; and was profoundly prostrated.

Physical examination revealed a tumor occupying the left half of the abdomen: dullness on percussion, extending from the ribs into the left inguinal region; and from the middle line of the back to the linea alba. The subcutaneous abdominal veins were slightly distended. The tumor was quite fixed, its position not being altered by manipulation, or during respiration. Upon palpation the consistency of the tumor was found to be firm, until three weeks before death, when it became soft.

An examination made of the blood, a few days after her admission into the hospital, showed a decrease of both red blood-corpuscles, and hæmoglobin. The blood count was, red blood-corpuscles, 3,000,000; hæmoglobin, 50 per cent. Repeated examinations of the urine showed nothing abnormal; at no time was there hæmaturia.

During the last three weeks of her life she had very frequent anorexia and vomiting, and was sustained chiefly by rectal alimentation and medicaments. She continued to fail, and passed into a comatose condition, in which state she remained for a week prior to her death, which occurred on March 13th. While in the hospital she was seen and examined by Dr. W. W. Keen, Dr. John B. Roberts, and Dr. William J. Taylor.

Post-mortem examination was made six hours after death; the abdomen only was examined. The abdomen contained about three ounces of a clear, yellowish-colored fluid. The tumor extended from about two inches below the diaphragm to about three inches above the brim of the true pelvis. The transverse mesocolon was attached to the tumor. Upon the left side firm adhesions existed between the tumor and the abdominal parietes, extending backward along the ribs to the spine; the

adhesions being so firm that in separating them the tumor was torn, followed by a discharge of about four ounces of a dark, bloody, grumous fluid. The spleen, which had been pushed up to the diaphragm, was loosely attached to the apex of the tumor. On the right side the tumor was firmly adherent to the vertebral column and lower border of the pancreas. After the removal of the tumor, a mass of fluctuating glands was found directly overlying the spinal column, and firmly attached thereto. After its removal, a small part of the body of the third lumbar vertebra, to which it was attached, was found to be carious.

The right kidney, spleen, and liver, were hyperæmic.

The tumor presented the appearance of an enormously distended kidney. On section, the kidney was found occupying the lower segment of the tumor, and enveloped in the covering of the tumor. The upper third of the kidney was degenerated.

The appearance of the tumor seems to indicate that it sprang from the supra-renal capsule; extended to, and involved, the left kidney, and that the supra-renal capsule was the seat and origin of the large cyst which was filled with grumous fluid and fatty disintegrated debris.

THEY
SHOULD
DISCRIMINATE.

We frequently see articles in the medical journals on injecting piles, without any discrimination as to the variety of pile. It was never intended, even by the most ardent advocate of the plan, to inject *external* piles. The pain, in consequence, is most terrific. If the plan is to be practiced, confine it to *internal* piles. The same can be said of the ligature.

Mr. Ericksen says: "All *external* piles should be cut off, all *internal* piles should be tied."

M.

EYE, EAR AND THROAT.

OCULAR
REFLEXES.

BY

JOHN E. HARPER,

A. M., M. D.,

*Professor of Ophthalmology
in the College of Physicians
and Surgeons of Chicago.*

Read at the anniversary
meeting of the Shelby
County Medical Society,
at Shelbyville, Indiana,
April 8, 1889.

The study of reflex disturbance is assuming more and more importance as our knowledge of the structure and function of the nervous system advances. The causative relation existing through the medium of the nervous system, between disease of one

organ, and that of another is so well recognized, that it is unnecessary to discuss its truth in a general way at this time.

Workers in the special fields of medicine and surgery have collected numerous valuable facts bearing upon this subject, which they have referred to the general practitioner to aid him in diagnosis and treatment. Much of the material thus offered, however, has been so interwoven with theoretical speculation, as to seriously impair its practical application. For this reason the practitioner, very justly, has come to look with suspicion upon statements made by the specialist, unless they are based on extensive clinical experience.

While the practitioner is willing to admit the advantages for collecting scientific data, possessed by the specialist in his particular line of study, yet at the same time he is aware of the tendency of one so engaged to view the facts he has collected, from a prejudiced standpoint. Like the five blind men, described in Saxe's poem, who interviewed the elephant, each forms his opinion of the whole, from his investigation of a part only.

It is said that the oculist is inclined to trace everything to the eye; gynæcologists to the uterus; the neurologist to the nerves, and other specialists in like manner. The specialist, who keeps pace with the progress in other departments of medical science, as well as his own, is in a position to be of

much assistance to the practitioner, as he is able to point out to the latter, that the causes of many diseases which he has located elsewhere, are traceable directly to reflex disturbance from a certain organ.

Every well informed practitioner of to-day is aware of the fact, that eye strain, in uncorrected errors of refraction will cause headache, neuralgia, epilepsy, chorea, and a host of other more or less pronounced symptoms of nervous disturbance. Nor is this to be wondered at, when we consider the amount of irritation which may result from a breach in the normal harmony, which exists between the muscles of accommodation and convergence. When we bear in mind that fourteen muscles are called into play while viewing near objects with both eyes, and that these muscles are under the control of three independent nerves, we can readily understand how easy it is to establish an area of reflex irritability, when the natural harmony of this muscular action is disturbed.

If one or both eyes be defective in shape, and an increased accommodative effort is called for, while the degree of convergence remains normal, the muscular balance is at once overthrown. Again, if one or more of the ocular muscles be unable to perform their function, perfect convergence is not accomplished, and harmony of action cannot be maintained.

Clinical observations show that as far as the function of the eyes are concerned, they will adapt themselves to circumstances within a reasonable limit, and will make extra accommodative effort without undue convergence, or will converge without accommodating more than is necessary for distinct vision; but at the same time, this unnatural strain of the accommodative or converging muscles will establish a hyperesthetic condition of the sensory nerves, and thus often serve as an obscure source of reflex phenomena.

A careful study of the influence of the nervous system has shown, that it is not

difficult to establish disease by long continued irritation of the peripheral endings of the sensory and sympathetic nerves. Some authorities have gone so far as to assert that all disease originates through the nervous system.

It is generally admitted that the processes of nutrition are controlled by the nerve centers, some of which are automatic, and some reflex, and so long as these and their corresponding nerve fibres are intact, any local damage is quickly repaired; but so soon as their integrity is interrupted, just so soon does disease become established.

It has been repeatedly demonstrated that the irritation of an afferent branch of the sympathetic, will result in the dilation of the arteries supplied by its afferent branches, a modification of the circulation is brought about and this is quickly followed by altered nutrition.

Clinical experience teaches, that a sensitive area within or about the eye, may cause serious disturbance of function, or modification of nutrition in remote parts of the human organism; just as an irritation of the nerves distributed to the gastro-intestinal canal, or generative organs may interfere with the normal exercise of vision. The presence of a tape worm in the intestinal canal, constipation, indigestion, or even the normal process of digestion may modify the accommodation power of the eye.

The ciliary muscle being supplied by the third and sympathetic nerves may by irritation of their peripheral branches, through its excessive action materially modify the nutrition of tissues remote from the eye. The first ill effect of the irritation of the afferent branches of these nerves, is felt by the nerve centers with which they connect. This influence upon the brain is notably apparent as shown by depression of spirits, restlessness, or indisposition to exertion. Should this source of irritation continue, more or less disturbance of the entire organism may result. The secretions are modified, derangements of the intestinal tract occur, in-

digestion, constipation and their concomitant changes become manifest, general and local disturbances in circulation, and not unfrequently all the phenomena of hysteria are developed.

Most of the preceding statements are well established facts, and the writer's aim in presenting them is to emphasize their importance and urge the practitioners present, to bear them in mind when dealing with cases such as outlined in the report of the three following:

Case I.—Dr. H. of Chicago, presented himself in October 1887, and gave the following history of his case. For more than twenty years, he had been a frequent sufferer, from severe attacks of neuralgia and headache. These attacks came on at intervals of one or two weeks, and were often so severe as to incapacitate him for business and even confining him to his bed for several days at a time. In addition to the pain experienced in and about the eyes, usually the left, he suffered attacks of extreme mental depression; was melancholy, devoid of ambition and irritable to such an extent that his family had serious fears of mental aberration. He frequently observed a want of co-ordinative power, and at times was so dizzy that he was apprehensive of an apoplectic attack. As might be expected he had in connection with this mental and nervous derangement, disturbances of the digestive tract, and the circulation. He was a habitual sufferer from constipation, dyspepsia, etc., numbness of the extremities, and always had cold feet. The symptoms observed were attributed by himself and medical advisers, mainly to exposure while serving as assistant surgeon in the late war, and he had long since been confirmed in the belief that his general health was permanently injured.

When the writer first saw him, he was just recovering from an attack of neuralgia of the left ophthalmic branch of the fifth pair. The eye was congested and very sensitive to light. There was marked

ptosis, evidently the result of long continued effort to exclude the light, by closing the eyelids. A diagnosis of hypermetropic astigmatism was made after an ophthalmoscopic examination. His eyes were atropinized and a test made, with the following results: The right eye $+1.50$ D. $+0.25$ D. cyl., axis 90. Left eye $+1$ D $\subset +1.50$ cyl., axis 90. His age being forty-seven years, full correction was given.

As was expected, some time was required before the glasses were fully accepted. A tendency to make more than necessary effort of accommodation, depending upon the general physical condition was apparent to a greater or less extent for two or three months. Finally however, complete relief from the neuralgic attacks was obtained and gradually disturbances of digestion and circulation were removed.

The doctor, though skeptical at first, is now convinced that his depression of spirits, lack of ambition, indigestion, constipation, cold feet, etc., were all primarily due to reflex irritation directly traceable to his uncorrected optical defects.

Case II.—Miss C., aged 17, was first seen January 10, 1888, when the following history was elicited. For several years her family had noticed that she was frequently very irritable, moody and had attacks of mental depression. She was considered a nervous child, and her infirmities were accounted for on that ground. Within the last two years she was noticed to be frequently absent-minded and to have a defective memory, her mind lapsing occasionally into a state of semi-unconsciousness. Associated with her mental condition, were numerous evidences of reflex functional disturbance. A refractive error being diagnosed, her accommodation was suspended with atropine and she was found to have mixed astigmatism. This was properly corrected with glasses and she rapidly recovered from the obscure and complicated conditions from which she has suffered.

Case III.—Mrs. M., married, age 32,

called first in March, 1887, and gave a history of having had frequent attacks of headache and spells of despondency during past fifteen years. Since first pregnancy about six years ago, has had a dozen or more attacks of persistent vomiting, sometimes lasting five or six weeks. The vomiting was controlled with great difficulty and no cause for it could be found by the family physician. Careful inquiry into the history of the case elicited the following facts. Prolonged use of the eyes for reading, sewing, etc., was usually followed by nausea, and each attack of vomiting was preceded by excessive use of the eyes at close range. The connection existing between the eye strain and the vomiting had not been suspected by the family physician, although he had concluded that the headaches were due to the presence of an optical defect. Under atropine, astigmatism, complicated with a pronounced insufficiency of the internal recti muscles was found and corrected by combining the proper prisms with cylinders. The result was so satisfactory that no trouble has been experienced since.

CONCLUSIONS.

While the writer will not attempt to argue that every case of refractive error or muscular weakness about the eye will cause serious reflex disturbance, yet he maintains that this source of trouble is much more frequent than would at first appear. Very much depends upon the physical condition and habits of the individual. A very delicately organized person is more likely to suffer than one who is robust and leads an out-of-door life and performs little close work with the eyes.

In some cases the reflected ocular irritation may not be the primary cause, but when a diseased condition is once established from any other cause, the muscular strain necessary to overcome the refractive defect or insufficiency, is sufficient to produce a continuance of the diseased condition until the muscular balance is restored. In cases where the connection between the eye strain

and the disease cannot be clearly demonstrated, it is at all events advisable to remove the former by proper correcting lenses, and if this is done in cases of doubt the practitioner will frequently be astonished at the result.

DISCUSSION.

Dr. J. L. Thompson of Indianapolis, said: "The limited time of this Society constrains me to simply say a few words on one portion of the paper, viz: the anomalies of refraction: but unless one is thoroughly qualified as a physician he is by no means competent even to correct them as they should be, as there are so many little things which have to be considered in prescribing glasses for different individuals. One patient presents with an anomaly who may be suffering from accommodative asthenopia with a hyperopia of a certain degree, or an astigmatism, or both with little power over the ciliary muscle and may need full correction. Another may have the anomaly of the very same degree, but the ciliary muscle may have more power and only partial correction is needed, and yet the two persons are young and of the same age. Both may have anisometropia, which in one should be fully corrected, while if it were done in the other his life might be made miserable by said correction. In one patient an insufficiency of a muscle may be fully corrected by a prism, while in another, with exactly the same degree of insufficiency, he could by no means tolerate a full correction.

One must fully understand this subject or he will be constantly making mistakes in his prescriptions. It is by no means the glass that seems best to the patient or the one which he sees best with, but the one which, after thorough examination, guided by a large experience, is said to have been found to correct the asymmetry. In addition to furnishing the patient with the proper glasses, one must be prepared to investigate other causes of reflexes that he may be able

to say to the patient that the glasses alone are not sufficient to correct the headaches of which the patient has complained.

Dr. Dudley S. Reynolds said: One of the points most important to be observed in the treatment of ocular reflexes, in those cases where no anomaly of refraction exists, and which I hoped to hear mentioned, is a very common form of anisometropia. It depends upon the habit many young persons have of looking sideways at objects, or holding objects too near the face. Dr. Robert Hook explained nearly two hundred years ago, why objects should not be held nearer than fifteen inches from the face, and muscular asthenopia was seldom encountered in intelligent subjects from that time, until the late Professor Donders laid down the law, that the normal far point should be reckoned at twelve English inches, and the normal near point for distinct vision should be established at eight English inches. This led the profession to advise twelve inches as the proper distance for reading fine print, and for watchmakers and other artisans. If you will make the experiment upon the basis of Donders' rule, I warrant the convergence of the optical axes of the two eyes shall be so great as to produce serious discomfort in a few minutes reading.

If you prescribe glasses on this basis, you must always be making some allowance for discrepancies between the theories and the practice.

Now, if an anomaly of refraction really exist, always correct it to the most perfect degree, under suspended accommodation, measure the lenses carefully before allowing the patient to use them, be sure you adopt the rule of Hook instead of Donders, and there will be fewer of those mistakes in trying to allow for the difference between theoretical and practical correction of abnormal degrees of refraction in neurotic people.

A little more attention to the proper condition for using the eyes in reading, might save many persons from pain.

OBSTETRICS AND GYNÆCOLOGY

OBSTETRICAL

SOCIETY OF PHILADELPHIA.

Stated Meeting Feb. 7, 1889,
DR. THEOPHILUS PARVIN
Presiding.

Reported for PROGRESS by
Dr. J. M. BALDY, Secretary.

Dr. Longaker reported a case of Placenta Previæ.

He said, the features of interest in this case are:

a. Hemorrhage at the seventh month in P. P. Lateralis.

b. The patient was in a septic condition when first seen, a week after commencement of hemorrhage. She was also very anaemic.

c. Turning by the bi-polar method was at once done and a living seven months foetus was born.

d. The patient made an excellent recovery and was sitting up in two weeks.

e. The surface of the placenta showed traces of fatty degeneration. It contained a clot the size of a walnut and several days old. Placenta previae occurred at her last confinement three years ago, and she came near losing her life from hemorrhage both before and during labor.

Case of Diseased Placenta, Anasarca of Fœtus and Hydramnion.

Mrs. Z., aet. 28, second ipara at seventh month of pregnancy. Her first child lived but a short time. The amniotic fluid was in excess; child and placenta weighed $5\frac{3}{4}$ pounds. About one-third of the placenta was the seat of a well marked change. There are foci, cheesy in the centre, gradually passing into apparently healthy tissue. These were more or less continued involving a v shaped segment. The abdomen of the child was so distended as to cause a slight obstacle to its delivery. Oedema of the extremities was slight. Both the pleural and pericardium were distended. The greater part of both lungs was solid, and on section a purulent fluid exuded from the cut surface. The child's extremities were rigid and flexed; it had been dead but a short time. Careful

auscultation had failed, however, during labor to detect foetal heart signs.

Dr. Hoffman: A case of pyosalpinx.

I shall go into the history of this case with rather more attention to detail than would be warranted, were it not for some features of previous history and treatment which render it in some respects more than ordinarily instructive.

Mrs. G., aet. 28, came to me for examination in August, 1888. Her history at the time was unsatisfactory, giving simply record of a discharge, for a long while and great pelvic pain, especially on the right side. A miscarriage was admitted. Examination showed a painful mass bound down to the right cornu uteri, so tender that exact mapping out was impossible. I doubt, however whether even under an anæsthetic an accurate diagnosis could have been made of the condition as revealed by operation, owing to the involvement of intestine. Intestinal adhesions always increase the size of ovarian and tubal tumor, rendering the decision of absolute extent impossible. The left side also was evidently involved but was not so painful as the right. I made no great effort to determine the extent or nature of this involvement inasmuch as her condition was evidently one for operation, as I told her, saying at the same time that treatment would be entirely useless. She left my office crying and I saw no more of her until two days before operation, December 18, 1888. I then ascertained that after seeing me she had gone to four other physicians, one whose diagnosis was uterine displacement, and whose treatment was the introduction of a pessary, strange enough with the result of apparent relief. She then visited the clinic of the Woman's Hospital and was comforted with the assurance that there was nothing the matter with her, and that she should go home and have a baby. She received like advice at the University. An up-town specialist, into whose hospital she afterward went with the intention of operation "for a ruptured blood vessel," the then

diagnosis, told her there was no necessity for operation, advising her that she was wise not to have submitted to it at my hands, promising her at the same time she should have a baby, and to promote this end the uterus was curetted. Time wearing on she again visited her last adviser, who now made the diagnosis of a ruptured blood vessel and advised operation for its "tying." At this juncture she again fell into my hands, much reduced from excessive hemorrhage for three weeks. I did not examine her but urged immediate operation, to which she consented. Two days later abdominal section was done. Assisted by Dr. J. Price, the right side was first explored and the ovary and tube found everywhere densely adherent. Enucleation was accomplished with much difficulty, and when attempt was made to apply the ligature the tissues were found so rotten that the blood vessels alone withstood the tension of the silk. The right cornu uteri was so involved that it was simply a mass of abscess tissue, and had to be curetted in order to free it from the necrosed portions. The bleeding was now so profuse that the application of a new ligature was necessary. The second ligature was wholly about uterine tissue. The left side was then examined and found even more extensively involved than the right, but without the presence of pus. The adhesions were more dense, but the tissues not being necrosed there was no difficulty in obtaining a good pedicle. The involvement of intestine was so great that I fully expected a fæcal fistula to result in spite of careful suturing. The right tube contained pure pus. A drainage tube was introduced and kept in the incision a little more than a week. The only complication was severe inflammation of the bladder and phlebitis of left int. saphenous vein. The patient is at present moving about her room.

The history of her trouble, since obtained is interesting. She was married at sixteen, and six weeks after her marriage her husband deserted her. Her baby lived seven

months, going blind some time before its death, having sores and becoming very emaciated. At this time she began to have a bad discharge which inflamed her private parts which were also much swollen. Had great pain on urination. She did not have intercourse for twelve months after the birth of her baby. She then contracted an alliance with another man, and afterwards within three years had two miscarriages and a still birth at eight months. Her hair has fallen out, but aside from this she has had no other signs of syphilis. The question here arises, what was the origin of the pelvic trouble? Was it gonorrhœa, syphilis, abortion, or the after effects of labor. That there are chances for believing, according to the various aspects of the case, that perhaps one, then the other of all these agencies entered into the causation of the disease will, I believe, not be disputed. Whether or not it is so conceded matters very little, however, so far as this case is concerned. That all these factors may bring all the various forms of pelvic disease can not be rationally disputed. That we can dogmatically affirm that any pelvic lesion is brought about by any one of these causes, with the exception of gonorrhœa, as proved by the presence of the gonococcus, not to be for a moment entertained. The fact is we can have the symptoms of pyosalpinx simulated in all its essentials by an entirely different condition, to-wit, tubercular disease of the appendages. To consider the relative frequency of each of these factors in the production of pelvic disease, it is not my purpose, but it requires more than the dogmatic assertion of any operator to prove that this, that or the other cause is always at the bottom of the lesion. But while the etiology of the trouble may be obscure, in well defined lesions like the one under observation, the diagnosis ought in most instances to be made, or if it can not, the question concerning it should be gone over, chances for error discussed and once for all have it confessed that the subject of

pus tubes and ovaries is not too hackneyed for consideration before a society such as this. We read of the infallible bi-manual examination which is able to pick up a fallopian tube or distinguish varicose veins in the broad ligament and then suddenly are confronted by failures such as I have here recorded. The fact stands out that the diagnosis insisted upon by the men who are accustomed to "claim everything," is a myth, and as Mr. Tait says, fit only for library papers. It is incredible that the diagnostician who can recognize, map out and differentiate the fallopian tubes should fail to recognize a mass the size of a small fist. Let us by all means have diagnosis, but let it be *diagnosis*, not myth. In this case the diagnosis, promises and treatment well nigh lost the woman her life. She wanted a baby and she was promised one; she nursed the delusion for three months. Promises may hold patients, but they do not work cures nor save reputable medicine the slur and suspicion of quackery. I believe in the present case curretting was directly responsible for the involvement of the uterine tissue. In the presence of tubal disease there is no excuse or palliation for the use of the curette. I believe that the so-called operation of "dilating and scraping" is responsible for much tubal and ovarian trouble that would otherwise remain quiescent. I have now a case under observation where this procedure was resorted to without relief, then electricity was tried and to-day the patient is worse than ever with operation her only relief.

Dr. Horatio R. Bigelow through the Secretary.

Apostoli's Place in Gynæcology.

After some complimentary remarks on Apostoli himself, Dr. Bigelow went on to discuss the armamentarium necessary for carrying out the electrical treatment. He thought it necessary to have a galvanic battery, a faradic battery, a galvanometer, intra-uterine electrodes for both currents and one for carrying both the positive and negative of the induced current within the

uterus, bulbous charcoal-pointed electrodes of various sizes for galvano-caustic applications, intra-uterine platinum electrodes and large bulbous vaginal and rectal electrodes. The belly plate could be made of potter's clay in which the metal plate could be buried, or better is the plate devised by Martin, of Chicago. A good galvanic battery should have a slight chemical action and great constancy. The Léclanché cells, or those of Daniell, he thought the best. With thirty-six Léclanché cells, without a rheostat, a strength of from 300 to 350 milliamperes can be gotten. He thought that the collector was invaluable, and that to measure the dosage exactly was an absolute prerequisite of success. The best galvanometer was that made by Gaiffe. The best faradic battery was that of Gaiffe with a chloride of silver pill and the induced current of high tension from the long thin wire was the one to be generally used within the uterus.

"The induced current penetrates the tissue profoundly by reason of its high tension, but contrary to physical laws the continuous current of low tension has a longer and more profound action. We have proved the diffusion of the electric currents and that the galvanic current propels itself through organic tissues, its influence being felt at remote points, the current never remains limited between the two poles." (Ominus). "If we now consider the difference that exists between continuous and induced currents during their constant passage we find that it is not difficult to distinguish between them, as the line of demarcation is clear. The induced current acts for an exceedingly short time during its passage. It produces at each instant of passage a greater or less excitation and causes molecular shock. The induced current acts mechanically as an excitant, but the continuous current penetrates more gradually the tissues, but more profoundly, acting chemically in such a way as to produce molecular orientation and chemical combi-

nation." (Ominus). The induced current traversing the liquid, semi-liquid or solid substances that go to form the human body, produces no chemical action whatever, simply a mechanical molecular disturbance. The continuous current, however, not only produces its chemical action at the poles, but this molecular disintegration and orientation is propagated throughout the zone between the poles. Just what the galvano-caustic action is that dissipates a tumor is not yet known—whether it coagulates the albuminoids or creates interstitial inflammation he does not know. It does reduce the tumor, and it remains for us to find out the why. He believed that time would demonstrate a change of cell life in addition to the purely chemical action which takes place around the poles. In Apostoli's clinic the induced current is not often used. It has a wondrous effect, however, upon the ovarian pain in hysterical women. Dr. B. has now seen twenty cases of this kind, and every woman received immediate relief after a seance of ten to fifteen minutes. He has seen a large number of bleeding fibroids, but has as yet to see one that failed to respond immediately to the continuous current, the positive pole being within the uterus. Apostoli often carries the current up to 350 milliamperes without any discomfort to the patient. It is most important that every part of the lining membrane of the uterus should be treated, and every hemorrhage, no matter how severe it may be, will resist. Dr. B. affirmed that the treatment would also very appreciably diminish the size of fibroids and at times entirely dissipate them. He quoted cases to prove this point. Punctures were made into the tumors to the depth of from one-third centimetres with a lance-pointed steel needle, the galvano-negative caustic being used usually. Everything was religiously clean and antiseptic. None of the patients had any bad symptoms. He affirms that Apostoli's method arrests hemorrhage, diminishes size, relieves pain and improves

nutrition without endangering life better and more surely than any other method, and asks why then resort to Tait's operation of excision of the appendages. The catarrhal forms of salpingitis yield kindly to the simple action of the continuous current, one pole in the uterus. Dr. B. is not yet ready to offer any decided opinion in regard to pyosalpingitis. He, however, cited several cases where negative puncture of the tube relieved or cured the case. In metritis the galvanic or faradic current should be used as one or the other agrees with the patient. Apostoli says that "this treatment applied according to his double or bi-polar method is an excellent and sometimes sovereign remedy in certain cases (recent subinvolution, chronic metritis in its first stage), inefficacious, or at least very insufficient in others (such as chronic metritis in its latter stages), and endo-metritis in any form." In endo-metritis the continuous current and the positive pole within the uterus are used. He cited some cases of fungoid end-metritis which had been cured. Dr. Apostoli faradized every woman, even when under an acute attack, who was suffering from peri-uterine inflammations, observing certain rules which he has laid down. In the sub-acute stage he uses first bi-uterine faradization with a current of tension, when the inflammation begins to give way he uses the intra-uterine continuous current, beginning first with the positive pole and following with the negative as soon as he is sure that the patient can bear it. In the chronic stage use the continuous current and galvanic puncture (negative), making the puncture in the diseased part itself. In old cases of peri-metritis, with much tenderness around the utero-sacral ligaments, much relief may be obtained by the vaginal electrode in the posterior fornix, while the negative pole is on the abdomen, using the induced current of high tension.

Dr. Joseph Price: A Years Work in a Maternity Hospital.

In making this report I desire briefly to

call attention to the amount of work done, the routine treatment of patients and a few alterations which have taken place in the building. During the year 1888 there were 184 deliveries in the retreat. Of these patients 69 were primiparas. There were 186 children born, including two sets of twins; 9 of these infants were stillborn; 102 were males and 84 were females. There were 13 forceps deliveries. Labor was induced in two cases in the eighth month. In one case a contracted pelvis and in one the presence of a large uterine tumor. There have been no deaths of mothers in the retreat for a period of nearly five years, furnishing a series of 540 deliveries without a death, the last death being from puerperal convulsions in a patient suffering from chronic Bright's disease and who had had convulsions in five previous labors. Since this death there has not been a case of puerperal septicaemia in the institution. The great success attending the work of this maternity is due to the strict enforcement of the law of cleanliness. Everything and everybody in the house is clean and jealously kept so. This system was enforced by Dr. Goodell and has been carried out on the lines laid down by him. The routine treatment of patients is as follows: the patient on entering the house is given a hot soap bath, dressed in clean underclothing and given a clean bed in the waiting ward. If necessary a laxative is given and the bowels kept soluble during her waiting period. Thereafter, until her confinement, she is obliged to take at least two hot soap baths per week and to wear clean clothes. She is allowed to do such light work about the house as the physician may deem advisable and is encouraged to take as much open air exercise as circumstances will permit. Every effort is made by the officers and employees of the institution to make it as cheerful and homelike as possible. When ready for the delivery room, the patient is again given a hot soap bath and an enema and a vaginal injection of 1 to 2000 bi-

upon a new clean delivery bed. Scrupulous cleanliness is observed in all manipulations of the patient and after delivery a second vaginal suppository of iodoform is introduced. The patient's person is carefully cleaned and all soiled clothing removed, the binder applied, a clean set of night clothes put on and the patient placed in a new clean bed in the ward. All of the soiled articles are immediately removed from the delivery room and a new bed made up for the next patient. The patients in the ward are carefully observed by the nurses, but no unnecessary handling or interference indulged in. The patients remain in the ward until they are able to be up, when they are removed to the convalescent ward. As the ward is emptied, the beds are burned and all the bedding most carefully cleaned. No soiled linen (as draw-sheets, diapers, napkins or other articles of clothing), is allowed to remain in the ward, but when soiled is immediately placed in a covered receptacle and removed from the ward and building. No sponges, wash-rags, or absorbent cotton are used in the house. Corrosive jute supplies the place of these articles; being clean, soft, remarkably absorbent and cheap, it is destroyed immediately after use. The pads used to absorb the lochia are also composed of jute and are likewise destroyed after use. The beds in the wards are of new straw. All discharges from the delivery room are immediately burned. All bedding soiled beyond cleansing or contaminated by purulent or specific discharges are likewise burned. In short every effort is made to keep the house perfectly pure and sweet. The arrangement of the house permits of rotation in the use of the wards, so that a ward, once emptied is not again used until three others have been filled. In the meantime it is most carefully and scrupulously cleaned and thrown open to the atmosphere. A similar system is pursued in the convalescent wards and delivery room. A few alterations in the building have very markedly increased the effectiveness of the institution

and the comfort of its inmates. In the first place, the bath-room and water-closets have been removed from the building proper and placed in the towers in the rear. The plumbing is as near perfect as modern sanitary science can make it. The verandas have been enclosed in glass, forming large, light, airy corridors about the rear of the building and furnishing a distinct, circulating atmosphere between the house proper and the wards and the water-closets. The ventilation of the entire building is simply perfect. The capacity of the house at present is about fifty patients per month, and, when a few contemplated changes are made, the capacity will be doubled and the institution rendered as nearly an ideal maternity hospital as is practicable.

Dr. Wm. Goodell said, it has always been a matter of great regret to him that he did not adopt this system a year or a year and a half before he did. He supposed it was partly due to the conservatism of old age and partly to a series of some forty deaths from bi-chloride poisoning; he had collected Farnier's reports of the results following the use of this agent, which so impressed him, that he was led to make the change. Before he adopted the system which has just been detailed by Dr. Price, he had once as many as five deaths in about 150 cases, four of these due to septicaemia. Latterly, a year would elapse without the occurrence of one or two deaths. When he first started, everything was new and clean, and for several years he had the best record of any maternity hospital in the world. After the buildings and articles had become old, deaths began to occur. He tried carbolic acid, but it proved of little value. After beginning the use of corrosive sublimate injections, iodoform suppositories and antiseptic pads, he did not have a death from septicaemia. The only death was one from Bright's disease of the kidneys. During this time he had been consulted perhaps a dozen times in the course of a year to see women dying from puerperal septicaemia. He thought that in

chloride of mercury solution. She is clothed in clean night robe and drawers and placed in private practice it would not be needful to follow out so strictly the details of the method, as it is practiced at the Preston Retreat. For instance, the antiseptic pad and the iodoform suppositories might be done away with. He believed however, that every practitioner should syringe out the vagina, both, before the birth of the child and after complete delivery, with a bi-chloride solution of 1 to 2000. The hands should also be disinfected. He was called in consultation by a physician in the country, who had had four or five deaths from sepsis in a short time. I found he had been treating a case of phlegmonous erysipelas. He knew of another physician, who had lost, he thought, seven cases, certainly five, from dressing a sloughing case of erysipelas. Antiseptic measures would probably have saved all these cases.

Dr. Henry Leaman would call the attention of those, who have the opportunity of observing the physiological processes of labor to one point, viz.: presentation. It is very difficult to accurately determine the presentation, particularly of the face, brow and posterior presentation. These observations should be verified by examination of the abdomen previous to labor and the location of the foetal heart sounds. They should also be confirmed by observation of the position of the head in the act of delivery. A mistake is readily made in posterior presentations. Posterior presentations are, he thinks, more frequent than we are in the habit of considering them. His object in speaking was to say, that every case of labor was a case for the minutest observation. There was another point, which he thought should be observed; that was the hour of the day at which labor occurs. There is, he thought, probably some connection between arterial pressure and the time of delivery. In recording the hour there would be an allowance to be observed in cases where the forceps were used.

There was another point not mentioned and that was the position of the succedaneum and its extent. These have to do with the natural process of labor and aid in determining the presentation.

Dr. J. Price said, he was as anxious about a labor as he was about a section. When he read reports of maternity hospitals with a mortality of from two to twenty-seven per cent., this troubled him not a little, now that he controlled a large maternity hospital, one in which Dr. Goodell had left a record of 275 cases without a death. He sees a labor case as frequently as he does a drainage after abdominal section. When this hospital was new, Dr. Goodell had a run of 250 cases without a death from any cause. This was the longest run of any institution at that time; after this deaths began to occur. Later he adopted the gospel of cleanliness and with what result he has just told you; the results are now precisely the same as he left them. In regard to Dr. Hirst's question as to whether the same results might not be obtained by simpler methods, Dr. Price said, that they did not differ much in regard to the use of solutions and that portion of the treatment. The toilet of the house was perhaps just as systematically carried out at the Philadelphia Hospital as at other institutions. The pad which he had shown, would hold a pint of fluid. It saved an immense amount of laundry work. It was now coming into use as a menstrual pad and was very convenient for ladies traveling. In private practice the mortality was greater among the rich than the poor. Among the poor he had had 700 deliveries without a death. He thought the difference was in the water-closets, which the better classes had in their houses. The mortality throughout the country was large.

In a small town in Ohio, with a high elevation and beautifully located, he had recently known of two deaths from septicaemia. Last summer he had been called to see puerperal cases nine times and all died.

PATHOLOGY AND HYGIENE.

ANTISEPTIC
USE OF
BINIODIDE
OF MERCURY.

BY

EUGENE P. BERNARDY,
M. D.Read to the Philadelphia
County Medical Society.
Stated meeting, January
23, 1889.

When I read my second paper "On the Value of Biniodide of Mercury as an Antiseptic in Obstetrics," before the Philadelphia Obstetrical Society (April 1, 1886), I fully intended leaving the results of my investigations to the medical profession,

and let them, by further trial, confirm the correctness of my conclusions.

In reading several papers on antiseptics, the biniodide of mercury is declared insoluble, and therefore difficult to use; in one paper, the cost is the objection, it being stated to be more costly than mercuric chloride. It is to be sincerely hoped that pecuniary considerations will never interfere in the use of any medicine that will assist in saving a human life. I certainly made myself clear in regard to making the biniodide a soluble salt, and called attention to the addition of *iodide of potassium*.

Dr. P. K. Bolshesolsky,¹ of St. Petersburg (*Vratch*, 1887, Nos. 10 and 11, page 220), from numerous experiments made by himself in Professor A. P. Dobroslavin's laboratory, concludes that biniodide of mercury is a more powerful and less poisonous antiseptic than corrosive sublimate. A solution of 1 to 4000 destroys putrefaction-microbes more completely than a corrosive sublimate solution of 1 to 2000. The biniodide dissolved in a solution of potassium iodide was recently tried, with apparently good results, in three cases of laparotomy, under Prof. A. I. Krassowski; for washing the floor a solution of 1 to 4000 was employed; for disinfecting the hands, 1 to 2000; for instruments, from 1 to 2000 to 1 to 3000.

In the *Gazette de Gynécologie*, January 1,

1888, Professor Krassowski,² of St. Petersburg, reports a series of eleven laparotomies in which he used as an antiseptic equal parts of biniodide of mercury and potassium iodide in solution. Two deaths occurred from causes not connected with the operation; in each case post-mortem examination showed union of the wound by first intention, and absence of septic inflammation. The mercurial was first used in a strength of 1 to 1000, which was progressively diminished to 1 to 4000.

Krassowski concludes that a solution of 1 to 4000 is an efficient antiseptic, and that this substance is less irritant than the bichloride, and can be applied to the integument in a five per cent. solution without producing irritation.

At the recent annual meeting of the Italian Obstetrical and Gynecological Society, Prof. Mangiagalli³ stated that the biniodide of mercury was a more active antiseptic than corrosive sublimate, less dangerous, and less injurious to instruments. The strength of the solution was 1 to 4000, iodide of potassium, chloride of potassium, or chloride of sodium being used to increase the solubility of the biniodide.

Dr. Rogée-Saint Jean d'Angely (*Lemaine Medical*) states that biniodide of mercury is not irritant to wounds, and is a more powerful antiseptic than carbolic acid. It has no odor, and an alcoholic solution of 1 to 300 is soluble in all proportions in warm water. Lister's dressing is expensive, and not adapted for use in armies. Since 1885 he has employed exclusively the biniodide with dressings of cotton and gauze, and in 108 operations (32 major) had only one death.

Dr. David Webster,⁴ in the *International Journal of Surgery*, October, 1888, states that the use of bichloride of mercury solutions in ophthalmic surgery has been abandoned at the Manhattan Eye and Ear Hos-

² New York Medical Record.

³ New York Medical Journal.

⁴ The Medical News, Philadelphia, December 1888.

¹ New York Medical Record.

pital, on account of corneal opacities following a certain number of cataract operations wherein these solutions were employed. The surgeon of the Royal Ophthalmic Hospital, about the same time, reported a similar experience. In March last he gave up the bichloride in surgical cases having corneal relations, and now uses Pana's fluid in all iridectomies and cataract extractions. The formula for this fluid is: biniodide of mercury, 1 part; absolute alcohol, 400 parts; pure water 20,000 parts. The results under this plan have been usually satisfactory.

In the number of *The Medical News* of June 16, 1888, is a copy of an article from the *Lancet* of May 12, 1888, on "A New Antiseptic Soap," which states that, until quite recently a satisfactory soap containing as an antiseptic one of the salts of mercury, has been difficult to prepare on account of the alkaline soap refusing to yield a good lather, oleate of mercury being formed—a compound which has little or no germicidal action. One of the most powerful antiseptics of the mercury salts is, as is well known, the bichloride. Moreover, it is cheap, and easily soluble, but it has the disadvantage of being extremely poisonous, and easily reduced by albuminoid matter with which it combines, thus being rendered inactive. In a paper recently read before the Society of Chemical Industry, in Glasgow, by John Thomson, the solubility of the red biniodide of mercury (which is claimed to be even a more powerful antiseptic than the bichloride) in iodide of potassium has been made use of. It is stated to be permanent, having no tendency to separate, and to be more germicidal in its properties than any other antiseptic soap yet known. Experiments were made to demonstrate this. Sterilized silk threads were suspended in a solution of the biniodide soap for ten minutes, after being saturated with solutions containing well known microorganisms, amongst which were the streptococcus scarlatinæ (Klein),

bacillus subtilis, orange sarcina, white bacillus from Tweed water, organisms from putrid urine, the micrococcus of osteomyelitis, aspergillus nigrescens, spores from various fungi, yellow micrococcus from pus, putrefactive organisms, bacterium termo, and bacillus scarlatinæ (Edington). The threads were then carefully washed to remove the soap, and placed in sterilized gelatine in the ordinary way. The threads were controlled by first sterilizing and then plunging into nutrient gelatine; if no growth occurred, they were accepted as being fit for use in the experiment. Washing the threads previously contaminated with organisms, two or three times carefully with distilled water, was shown, by experiment, not to remove the organisms; for, on being placed in the gelatine, growth readily took place. The results, as shown in tables, are very remarkable. In all the experiments with a few very uncertain exceptions, growth of the organisms was completely prevented, even after the lapse of four days. Similar experiments, made with "carbolate of mercury" soap, showed it to be less powerful as a disinfectant, and much slower in its germicidal action. In experiments carried out in the same manner with other antiseptic and ordinary soaps, it was shown that the growth of the organisms, in many cases, was not prevented. The importance of such a soap in medical and sanitary science is very obvious. The biniodide soap has been used in the treatment of eczema with well marked success, especially where the irritation is due to the fermentations of accumulated secretions, the fermentations being set up by microorganisms. It has also met with similar success when used in parasitic skin diseases, such as favus and ring-worm. As a parasiticide, too, the importance of its application to patients during the period of desquamation in scarlet fever is evident.

The interesting experiments, and the careful manner in which they were carried out, are my excuses for giving the above notes

in full. They more than corroborate my opinion of the value of biniodide of mercury as an antiseptic.

As will be seen by the title of my present paper, I have embraced a larger scope than in my two previous papers, which were entirely of obstetrical cases. I have divided my paper: First, history of obstetrical cases; second, history of abdominal abscess intercurrent with typhoid fever; third, surgical cases; fourth, application of the biniodide of mercury wool to the chest in pulmonary troubles; fifth, as a disinfectant in the discharges (alvine) of typhoid fever.

OBSTETRICAL

CASES.

Case 1.—Mrs. L., aged nineteen, first pregnancy; was called to attend her (January 24, 1886) in a premature labor; she was pregnant about six and a half months; when I arrived, I found she had been delivered of a dead male child; the placenta came away in two hours; the patient did well up to the evening of January 27th, when she was taken with a chill, which was repeated in three hours; when I saw her on the morning of the 28th, her skin was hot and dry, face flushed, pulse 112, temperature 102°; tongue thickly furred, abdomen slightly swollen and very sensitive; lochia offensive. Ordered quinae sulphatis, gr. xx; morphia sulphatis, gr. $\frac{1}{4}$, night and morning; poultice over abdomen, and hot vaginal injections of 1 to 4000 solution of the biniodide of mercury every four hours; at the second injection the discharges became free from any odor. January 29th, pulse 100, temperature normal. This treatment was kept up, with the exception of the large doses of quinine, to October 5th, when the injections were reduced to one a day for about four days, when the patient was discharged cured.

I have confined this case since of a full-term, living child; the biniodide injections were used at once; she had a good lying-in; discharged on the ninth day well. (The

above case really belongs to my second series, but the manuscript was mislaid at the time, and found too late to be incorporated in my second paper.)

Case 2.—Mrs. M., aged thirty-five; fifth confinement; during her pregnancy she had worked very hard, doing almost the work of a man. Was called to attend her in labor, March 18, 1886; when I arrived at her bedside I found she had been in labor since the previous day; she appeared completely worn out, having hardly any strength to bear down; the family refused positively instrumental interference. I gave two doses of the fluid extract of ergot, teaspoonful, repeated in half an hour; under its influence the child was born; the placenta soon followed.

The patient did well up to March 24th, when, in the evening, she had a severe chill, which again occurred the following morning (March 25th). I saw the patient on the following day; she seemed to have aged fully ten years; her face was drawn, and of a deep yellow color, eyes bright and sparkling with delirium; pulse 140, temperature 105°; the abdomen was immensely swollen, and could not bear to be touched, more especially on the right side. Diagnosed metro-peritonitis. Lochia arrested. Ordered quinae sulphatis, gr. xx., night and morning; morphia sulphatis, gr. $\frac{1}{4}$, whenever pain was severe; hot poultice over the abdomen, hot vaginal injections of 1 to 4000 solution of biniodide of mercury. March 28th, pulse 120, temperature 101°; lochia returning, abdomen not so sensitive. This treatment was continued up to March 31st; the abdomen now allowed of closer examination; in the right inguinal region could be detected a large mass; vaginal examination showed the uterus bound down and completely surrounded by lymph. Dr. W. Goodell, being called in consultation, verified the diagnosis. The biniodide injections to be continued; internally, quinine sulph., gr. iij., three times a day, besides an alterative tonic. The patient gradually

recovered her health, without any additional treatment.

In this case the injections of the biniodide were constantly used for over a space of three weeks, first every four hours, then three times a day, then once a day, without the slightest systemic action of the drug occurring.

Case 3.—On July 11, 1886, I was asked to see Mrs. W., in consultation with her family physician; on entering the house a most sickening odor struck my nostrils; it reminded me of uterine cancer in its last stage; the more I advanced, the worse the odor became; at last I reached the room and the bedside of the patient; of all the odors, I never want to smell the like again; as the nurse remarked, it was worse than decayed carrion; how the patient lived through such a condition was simply miraculous.

I found she had aborted about two weeks previously, and had declined any interference in regard to extracting the placenta, saying "it will come away." On examination, I found the vagina full of sticky, horribly-smelling, broken-down placental tissue, the mouth of the uterus opened, the uterus full of the same kind of material as found in the vagina; the patient declined the use of any instruments, so I broke down and pulled out all that came within reach of my finger; I then washed out the uterus with a hot 1 to 4000 solution of the biniodide of mercury; not yet satisfied, I washed out the parts with another quart of the solution (1 to 4000), until the water came back clear.

I did not see the case again, and, in answer to a letter to the attendant physician, I received the following:

PHILADELPHIA, MAY 20, 1887.

"MY DEAR DOCTOR: I am glad to inform you that Mrs. W. did very well. The *iodide of mercury pellets* acted like a charm. There was no unpleasant odor attached to the discharges after we began their employment. . . . I have been an ardent

advocate of potassium permanganate, but I am now a convert to the biniodide as an antiseptic."

Case 4.—Mrs. H., primipara, aged thirty, fell in labor November 18, 1886. On my arrival at her bedside, I found she had been in labor for some time, the mouth of the uterus wide open, bag of waters unruptured, vertex presentation. On making abdominal palpation, detected at once a twin pregnancy; after a somewhat lingering labor, the first child (boy) was born; on examination, I found the second child (girl) presenting with vertex left posterior; the head came down very slowly, and, on the solicitations of the patient and family, the labor was terminated with forceps. The patient did well up to the evening of the second day, when, about midnight, she was taken with severe frontal headache and chills. I saw the patient in the chill; half an hour after her temperature was 104°, pulse 140; delirious; ordered quinine sulphat., gr. xx., at once, and repeat next morning. Next day (November 21st), temperature and pulse the same, completely out of her mind; lochia almost ceased flowing, and what was present was offensive; abdomen extremely sensitive to the touch. Ordered the quinine to be continued, gtts. x. tr. digitalis four times a day; hot flax-seed-meal poultices over abdomen, hot injections in the vagina of 1 to 4000 biniodide of mercury every four hours. The following day the lochia returned normal. The condition of things remained about the same up to November 25th, when the symptoms were improved; the patient was discharged well, December 4, 1886.

(The following case was the first patient on whom I used the biniodide of mercury injections, and whose history is given in my first paper, June 4, 1885.)

Case 5.—Mrs. D., third confinement (being compelled to leave the city she fell into the hands of another physician) fell in labor September 6, 1886. After a lingering labor, she was delivered of a still born

child; on the second day, as far as I can learn, all the symptoms of an attack of puerperal fever set in; she remained very sick for several days. No vaginal injections of any kind were used. When I saw the patient, on September 19, 1886, she was suffering with an extremely tender abdomen, more especially on the right side, on which side could be detected a small lump. Vaginal examination disclosed the uterus partially surrounded by lymph. Discharges from the vagina very offensive. Pulse 100, temperature 101° – 102° . Nothing could be retained on the stomach; as a drink, frozen champagne was ordered. Quinine sulphate, gr. x., once a day; equal parts of ungt. hydrarg. and belladonna to be rubbed over the abdomen once a day, followed by hot poultices, hot injections of the 1 to 4000 biniodide three times a day. My following visit found my patient improved, and in a week was discharged, but it was some time before she regained her usual strength.

On November 1, 1887, I delivered the above patient, after an easy labor, of a large, female child; immediately after the placenta came away, I washed the uterus out with a 1 to 4000 injection of the biniodide; the injections were ordered to be used three times a day throughout the lying-in, which was perfectly normal, and the patient discharged, well and strong, on the ninth day.

Case 6.—Mrs. C., aged nineteen, first pregnancy; was called to attend her on the morning of August 19, 1888. After an easy labor, she was delivered in the afternoon of a large male child; the placenta came away in about twenty minutes. The following day the patient was doing well, but had not been washed, and the odor in the room was very disagreeable. On my following visit I found the patient in a high fever, temperature 103° , pulse 130, full and quick; tongue dry and chippy; the skin from the posterior part of the vulva back to beyond the anus was raw and covered with

minute bloody points; abdomen very tender, lochia, what there was, was extremely offensive.

On close inquiry, I found that the mother of the patient, who was supposed to be nurse, had gone on a drunken debauch since the birth of the child, no doubt celebrating her “grandmotherhood;” the patient was placed at once in charge of a competent nurse: hot poultices were ordered to the abdomen; quinine sulph., gr. v. morphia sulph., gr. $\frac{1}{4}$, every four hours; hot injections in the vagina of 1 to 4000 biniodide of mercury every three or four hours, equal parts of zinc ointment and Goulard’s cerat were applied over the raw surface.

August 24th, pulse 110, temperature 101° ; lochia coming freely and without odor. August 26th, pulse 100, temperature 99° ; 4 P. M., pulse 100, temperature 101° . Condition better, treatment continued; patient discharged, entirely cured, September 1, 1888.

With the three cases reported in my first paper, eight in my second, and the six cases just detailed, in all, seventeen (obstetrical) cases in which the biniodide of mercury had been employed, gives us, certainly, sufficient data to draw positive conclusions.

ABDOMINAL ABSCESS INTERCURRENT WITH TYPHOID FEVER.	<i>Case.</i> —On April 20, 1887, I was requested to see Mary B., aged five years. The little patient had been ailing for the past week, suffering from constant frontal headache, very feverish, loss of appetite, and having a diarrhœa. I found her in bed, with a temperature of 103° , very quick, compressible pulse, tongue dry, and a number of rose-colored spots over the abdomen and chest. The case was running the ordinary course of typhoid fever, when, on May 5th, the child was taken with a sudden, sharp pain in the iliac region; my visit found the child suffer-
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ing agonizing pain in the abdomen, which was tense and swollen; in the right iliac region could be felt a lump the size of an egg; under appropriate treatment the acute pain somewhat subsided. On May 8th, my attention was called to the navel, which had become red, inflamed and pouting; on touch, a feeling of fluctuation was imparted to the finger. May 10th, the child passed from the bowels a large quantity of pus; the angry appearance of the navel disappeared, all acute symptoms seemed abated. On my visit of May 12th, I found the navel again inflamed, with positive indications of pus underneath; the following day it broke, discharging about a cupful of pus. I now suggested a consultation in regard to the advisability of an operation. It was declined. Same condition continued up to the first of June; the child by this time had become greatly emaciated, constant discharge of pus from the navel, and symptoms of septic poison were commencing to show themselves. At last on June 12th, consent was given to an operation. June 13th, Drs. Allis, F. Elder, and C. Reed were present. The patient was etherized by Dr. Reed; after a close examination, and taking the weakened condition of the child into consideration, and also that the abscess cavity having made an opening at the navel, it was decided that, instead of opening the abdominal cavity, a counter-opening in the left iliac region be made, and a drainage-tube, extending from the navel to it, be introduced and the abscess-cavity washed out. I washed out the abscess cavity through the tube with a two-quart solution of 1 to 4000 biniodide of mercury; the abdomen was then covered first with biniodide gauze, over which was laid a layer of the biniodide wool, all held in position by a bandage that had been washed in a 1 to 4000 solution of the biniodide of mercury. The abscess cavity was ordered to be washed out morning and night with a 1 to 8000 solution of the biniodide; the child rallied well from the effects

of the ether. While washing out the cavity, on May 17th, a piece of straw came through the drainage-tube. May 22d, discharge of feces through the lower end of the tube, which occurred two days in succession; for the following ten days, when the child partook of food, more especially if this was an egg, within a half hour some of it partially digested would appear at the end of the upper part of the tube; if the discharge occurred later than a half hour, it would appear at the lower end of the tube; this clearly demonstrated a fecal fistula in connection with the abscess cavity. Gradually all discharges ceased, and the tube was taken out July 23, 1887; a week later both openings were closed, but it was several months before the child could resume her ordinary diet; apples would inevitably bring on severe colic.

None of us at the time of the operation went further than to "hope" that the little patient would get well. The case demonstrates well the antiseptic properties of the biniodide. It was an extremely warm month, and, with the exception of the two or three days on which the feces passed down through the tube, the odor of the discharges was held in abeyance.

DOUBLE LACERATION
OF THE CERVIX.

Case.—Mrs. F. had a large, double laceration of the cervix following a natural labor. I first saw the case in May, 1885, and advised operation. Operated October 5, 1885. Extensive denudation had to be made; fourteen silver stitches were necessary; hot water was used to cleanse the parts during the operation. On the second day a very offensive bloody discharge occurred. The vagina was washed out with a hot 1 to 4000 solution of the biniodide of mercury three times a day; at the first injection all odor disappeared, and did not return throughout the rest of the treatment; the stitches were taken out on the tenth day, with perfect union.

ABSCCESS OF RIGHT
FOOT.

Case.—In February, 1887, I was called to see Master McG.

About a week previous a heavy box fell on his foot; painful at the time, but not painful enough for him to give up his work, he continued to work up to February 10, 1887; on the previous evening his foot became swollen and painful; under poultices the inflammation centred, and on February 20th the abscess broke. The opening was stubborn to heal, offensive pus was discharged; every day I injected the cavity with a 1 to 2000 solution of the bichloride of mercury and packed; this treatment was kept up for ten days without any change: the bichloride was then changed to a 1 to 4000 solution of the biniodide of mercury, the discharges were made pure, and in the course of another ten days the opening closed, but the foot remained tender for several weeks.

ABSCCESS EXTENDING
FROM THE RIGHT
AXILLA DOWN THE
RIGHT SIDE TO ONE
INCH BELOW THE
FLOATING RIB.

Case.—W. S., aged thirty, barber, of scrofulous habit, somewhat dissipated having a wart on the right middle finger, picked it with his

finger-nails; the result was an acute inflammation of the entire arm. I saw the case July 16, 1888; under cooling applications, the inflammation soon abated. About July 21, 1888, the right side, extending from the axilla down to midway between the last rib and the crest of the ilium became intensely inflamed; the pain was excruciating, and large doses of sulphate of morphia gave only momentary relief; large flax-seed poultices liberally sprinkled with laudanum were applied. On the 24th I detected fluctuation at the lower border, made an exploratory incision, and obtained half a cupful of fetid pus and broken-down blood; this gave slight relief. On the 26th the pain returned tenfold; the same evening, the patient having been etherized by Dr. S. Solis-Cohen, I enlarged the previously made

incision to three inches, and about half a pint of extremely fetid pus was discharged; the finger was then introduced, and two encysted pus sacs, situated at the edge of the scapula, were ruptured, and another half pint of pus was discharged; the cavity was then washed out with a 1 to 4000 solution of the biniodide of mercury, a drainage tube introduced, flax-seed poultices applied, and over all a layer of biniodide wool.

Next day I found the patient had had a good night's rest; I removed the poultice; cavity to be washed out three times a day with the biniodide; drainage tube taken out on the fourth day, and within a week the case was discharged well. It is hardly necessary to state that good nourishment, iron, and quinine were ordered. After using the biniodide no odor was perceptible in the discharges.

THREE CASES OF CAR-
BUNCLE.

Case 1.—April 23, 1887, I was asked to see Mrs. P., aged

seventy-two, and found her suffering with a carbuncle on the back of the neck, six inches long and four inches wide. It was riddled with a number of suppurating points; on the previous day the patient had been given up by her medical attendant as incurable. On Sunday, April 24, 1887, after the patient had been etherized, the wound, instrument, and sponges were made antiseptic by being washed with a 1 to 4000 solution of the biniodide, after which a crucial incision was made and all the hardened tissue dissected out, down to healthy tissue, thoroughly washed out with the biniodide, and a flaxseed meal and charcoal poultice applied; the sore to be well washed three times a day with the biniodide, when a fresh poultice was applied. Internal treatment, iron, quinine and full diet. In twenty days the patient was discharged well. The disagreeable odor in this case was not entirely dissipated, but was held under control.

Case 2.—Mr. B., coal merchant, aged

forty. Carbuncle in right shoulder, size of an egg, hard, indurated, extremely painful to the touch, and a point of suppuration at the center; the case was seen April 7, 1888. The next day, after the patient had been etherized, I made a deep, crucial incision, and dissected out all the hard, indurated tissue; the same treatment was used as in Case 1. No odor connected with the discharges. Patient discharged, cured, in two weeks.

On October 20, 1888, I was again asked to see the above patient. I found him suffering from an attack of herpes of the back of the neck, which was, in a few days, followed by a number of abscesses, two of them resembling small carbuncles. A charcoal poultice was applied, and in three days all the abscesses were opened, but during the following week there seemed to be no change for the better. I then ordered a piece of linen to be saturated with a 1 to 4000 solution of the biniodide and applied to the surface, and over this a flaxseed charcoal poultice; within forty eight hours the angry appearance of the abscesses and skin abated, and in four or five days all inflammation had disappeared, when the patient was discharged.

Case 3.—J. E., aged sixty-nine, was taken sick about three weeks previous to my seeing him. It first commenced with a painful tumor on the neck. When I saw the case (July 19, 1888), the entire surface from the superior curved line of the occipital bone down to the seventh cervical vertebra and from ear to ear was one immense, suppurating surface, covered with a thick, yellowish green membrane. The discharges were highly offensive. Pulse quick and compressible; slightly delirious; tongue covered with a thick, black, highly offensive membrane. Ordered a piece of linen to be saturated with a 1 to 4000 solution of the biniodide and applied over the surface, and over this a charcoal-flaxseed poultice applied every three hours. The odor was held in abeyance. This treatment was continued

for about ten days, when the surface became clear of all adventitious membrane. Poultice was continued; carbolic acid was ordered in place of the biniodide. Patient discharged, cured, September 29, 1888.

Dr. S. Solis-Cohen saw the case for me in August, and we concurred in one prognosis, which was death; but we were more than agreeably surprised.

BINIODIDE OF MERCURY WOOL AS AN APPLICATION OVER THE CHEST IN PULMONARY TROUBLES.

When, in the winter of 1886, I first ordered the chest of a child suffering with catarrhal pneumonia enveloped in a layer of the biniodide of

mercury wool, it was simply to overcome the disagreeable matting of the cotton. The child, previously to its use was very restless, and seemed to suffer pain. On the following visit I found that the little patient had had its first quiet sleep since the commencement of its sickness; since then I have almost entirely discarded the use of cotton. The results in a number of cases lead me to believe that there must be something more than the warmth of the wool. Can it be that the heat of the body disengages the biniodide, and as the consequent result, the patient is constantly surrounded by an antiseptic atmosphere?

In a case operated on for cancerous constriction of the bowel, by Dr. Charles B. Penrose, the patient, about the fourth week, was seized with a sharp pain in the right side below the nipple; counter-irritants did not relieve her; on auscultation, crepitant râles were easily detected in the lower right portion of the lung, under the point where the pain was complained of; the side was enveloped in the biniodide wool, and within twelve hours the pain had entirely disappeared. In the neuralgic pains always present in a case of phthisis, I have found the wool to invariably diminish, if not entirely dissipate the pains, and the expectoration seems easier and in smaller quantities.

My attention was called to the following by my office-pupil, J. N. England: "Biniodide of Mercury Pulverization for Tuberculosis" (*American Journal of Pharmacy*, October, 1888). Miquel and Rueff's formula is given by the *Arch. de Phar.*, September 5, 1888, as follows: Biniodide of mercury and iodide of potassium, of each 1 gramme; distilled water, 1000 grammes. The solution is stable. At the beginning 10 c.cm are sprayed once daily; to be increased to 25 c.cm. twice daily. The larger portion of the liquid should be inspired. It reaches the lungs, says the author, but salivation does not follow, even after months of treatment. The sputa changes in character and diminishes in quantity; the number of microbes is lessened, but these organisms rarely disappear completely. The cough increases at first, and afterward subsides.

If my theory of the disengagement, by heat, of the biniodide from the wool be correct, its action will readily be explained by the above experiments of Miquel and Rueff.

DISINFECTANT IN THE ALVINE DISCHARGES OF TYPHOID FEVER.	For the past two years I have used the pellets of biniodide dissolved in the alvine discharges of typhoid
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fever, and the results have always been satisfactory.

In the spring of 1886 I treated an extremely bad case of typhoid fever; the patient was broken down from dissipation, having had, about two weeks prior to his illness, an attack of delirium tremens; the alvine discharges numbered from twenty to thirty a day, and were highly offensive; chloride of lime, and different forms of chloride and sulphate of iron were used without any diminution of the sickening odor. I then ordered two (1 to 4000) pellets of the biniodide of mercury to be dissolved in a half pint of water and placed in the bed-pan, to be renewed every time

the pan had been used by the patient; the odor was completely dissipated, and kept so.

In another case the bichloride of mercury pellets were used without success; the biniodide pellets gave the desired result. In a case of labor which, at the end of the lying-in, terminated in an attack of typhoid fever, the nurse used biniodide pellets on her own account in the bed-pan, there was no disagreeable odor throughout the course of the disease.

The description of the action of new medicinal preparations or new properties to an old medicine necessitates tedious histories of cases; this must be my excuse for dragging through such dry details.

It is not my intention to present to you the biniodide of mercury as the one and only infallible antiseptic; I simply present my results, and have tried to give impartial histories, without exaggeration, simply as they have occurred. But the action and results of the biniodide of mercury fully strengthen my belief in its stronger antiseptic value and non-irritating properties over the bichloride.

DISCUSSION.	Dr. Frank Woodbury: Since Dr. Bernardy read his previous communication on the use of this agent in obstetrics, I have resorted to it in several cases where symptoms of septicæmia appeared, and where the lochia were offensive. In one case of placenta prævia, where there were offensive discharges, and there was danger of premature labor, I found that the use of this agent in the strength of 1:4000, corrected the fetor, and the patient escaped premature labor. I subsequently lost sight of her, but I suppose that delivery has since taken place.
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I have two criticisms to make in regard to these so-called pellets of biniodide of mercury. In the first place, they are not pellets, and, in the second place, they do not contain the biniodide of mercury. They are really troches, and their appearance is

so inviting that they might be taken by children, or persons not familiar with their dangerous properties, as confectionery. I think that if they were really pellets, or if they were formed in the shape of bacilli, divided into ten portions, so that by breaking off one portion the proper amount of the agent would be secured, the danger would be lessened.

I reference to the second criticism. The biniodide of mercury is not soluble in water. It is soluble in an excess of bichloride of mercury, or in an excess of the iodide of potassium. The preparation is really an iodohydrargyrate of potassium. This is really Neisser's reagent, which has been used as an excessively sensitive agent for the detection of alkaloids, and for the recognition of ammonia and compound ammonias.

I have one thought to offer, which seems suggestive: The value of Neisser's reagent consists in its power to precipitate alkaloids, and to decompose compound ammonias. Now in these cases of bacilli found in offensive lochia and suppurating cavities, the bacilli are probably accompanied by the products of their growth and multiplication. These resemble ptomaines, and are, probably, properly called leucomaines. Phillips, of Edinburgh, found that by injecting into animals a watery extract obtained from the sputa of consumptives, and from other tubercular products, he produced the ordinary symptoms of phthisis, fever, emaciation, loss of appetite and strength, and progressive decline of the powers of life, and finally death. Now, it is probable that these substances, which are alkaloidal in character, are precipitated by Neisser's reagent.

We can not at this time enter into the question why certain agents are antiseptic and others are not, or why one should be more antiseptic than another. This is a matter of experiment. We do know, however, that Neisser's reagent has for a long time been used in the laboratory for the precipitation of alkaloids, and this fact in-

terested me in this connection as possibly offering an explanation of the effect of this agent in the treatment of suppurating wounds and of offensive lochia.

Dr. E. P. Bernardy: From the start I objected to the shape of the pellets, thinking that they looked too much like candy, and I think that there will soon be a change so that this danger will be avoided. The pellets of bichloride look very much like chlorate of potassium lozenges, with the exception that the word "poison" is stamped on them.

In regard to this being a double salt. This was the first thing that struck my attention. When I first used this preparation, in 1884, I dissolved the biniodide in alcohol. This was found to be inconvenient, and through the kindness of Mr. Hayes, who allowed me the use of his laboratory, his assistant and I worked up this subject. We added iodide of potassium, and then found that the slightest moisture imparted to one pellet was enough to destroy the entire bottleful. We then decided to add the muriate of ammonium, which prevents this chemical reaction until the pellet is thrown into water. The pellet goes in as the biniodide of mercury, and the iodide dissolves it; but before the change takes place it has been used upon the patient.

In regard to my use of this preparation. I have studied it faithfully, and have tried to look upon the cases in an unbiassed way, and to give a fair history of them. I have sometimes first used the bichloride, and it has not fulfilled the intention as the biniodide has done.

FOREIGN

CORRESPONDENT.

Dr. John Leslie Howard has been appointed Special Foreign Correspondent of PROGRESS. He sails on the 1st of May, and will be abroad about a year, spending most of the time walking the great hospitals of London.

BOOKS AND PERIODICALS.

AMERICAN

RESORTS.

With notes upon their climate.

BY

BUSHROD W. JAMES,

A. M., M. D.,

Member of the American Association for the Advancement of Science; The American Public Health Association; The Pennsylvania Historical Society; The Franklin Institute, and the Academy of Natural Sciences, Philadelphia; The Society of Alaskan Natural History and Ethnology, Sitka, Alaska; etc., etc. With a Translation from the German by Mr. S. Kauffmann of those Chapters of "Die Klimate der Erde," written by Dr. Woeikof, of St. Petersburg, Russia, that relate to North and South America and the Islands and Oceans contiguous thereto.

Intended for invalids and those who desire to preserve good health in a suitable climate.

Philadelphia and London.
1889. F. A. Davis.
Octavo. 300 pages, cloth.
Price, \$2 00.

"The longer the author is engaged in professional work as a physician, the more he is impressed with the importance of the residence of invalids in a suitable climate as an almost indispensable factor in the cure of many forms of disease. If we, as a people, would more generally seek health in our own sanatoria, and our medical men would encourage their patients so to do, the value of these places of retreat for health would soon be appreciated and their fame become widespread. This book

does not aim at the scientific consideration of the subject of climatology, but has been prepared in the hope that it may be of some practical service to the numerous health seekers in search of information regarding our climate and health resorts."

In discussing the specific value of climatic conditions, the author says, "In localities where considerable moisture exists and the population is dense, animal food unprotected will decompose very quickly; while the kind of nourishment exposed to the same temperature in some of the dry, interior, high plateaus, does not easily disintegrate, but becomes dry and is preserved for a long period without the least trace of putrefaction." He then proceeds to discuss cold as an agent of preventing decomposition, for the purpose of showing the value of a cold climate; undertaking, at the same time to establish as a fact "that

phthisis pulmonalis cases, if not in the last stages of the disease are improved, or the malady held in abeyance, in a cold, dry atmosphere."

In the first chapter of Gerster's rules of aseptic and antiseptic surgery, the conditions under which animal matter undergoes decomposition are formulated thus: Moisture, a certain temperature called warmth, and the presence of living organisms, or fungi. Now, since it is well known that phthisis pulmonalis is a veritable dissolution of the organism by the action of that process commonly called fermentation, identical in its course of development with that which is called putrefaction, it is absurd to suppose that an already infected body would be materially benefited by atmospheric conditions. In the first place, it is impossible to maintain life at a temperature so low as to arrest the growth of the bacillus tuberculosis. Of course the person may breathe an atmosphere exceedingly frigid, but the richness of that atmosphere in oxygen, an essential element of combustion, enables the person breathing it to maintain his bodily heat, at an almost uniform standard with that existing in an atmosphere of much higher temperature. Dr. James' arguments are, from a pathological standpoint, exceedingly deficient in the essential element of fact; all the evidence which tends to establish the climatic cure of consumption is just so much evidence of the utter recklessness with which statements are made by people concerning matters with which they have no acquaintance. Before Koch discovered the bacillus tuberculosis, mistakes in diagnosis were excusable. If Dr. James had carefully read the treatise on diseases of the lungs of a specific, not tuberculous nature, by Prof. Germain See, published by Wm. Wood & Co., 1885, he would have been able to make a much stronger argument in favor of climatic resorts for a large class of persons afflicted with bronchial and pulmonary diseases, formerly regarded as types of tuberculosis, but which, by the aid of microscopical research are now easily differentiated.

CORRESPONDENCE AND SOCIETIES.

SHELBY
COUNTY,
INDIANA,
MEDICAL
SOCIETY.

FIRST ANNIVERSARY.

Reported for PROGRESS

BY

E. F. WELLS,

M. D.,

Chairman of the Committee of Arrangements.

The Society was called to order promptly at 9:30 A.M., April 8, 1889, by the President, Dr. J. G. Wolf, with a full attendance of members and the following invited guests: Dr. I. N. Love, St. Louis, Mo.; Dr. J. E. Harper, Chicago, Ill.; Dr. W. H. Taylor, Cincinnati, Ohio; Dr. Dud-

ley S. Reynolds and Dr. Jos. M. Mathews, Louisville, Ky.; Dr. Geo. J. Cook, Dr. J. W. Marsee, Dr. W. H. Wishard, Dr. J. L. Thompson, Dr. G. V. Woolen, Dr. Kline, and Mr. W. H. Armstrong, of Indianapolis.

In the regular order of business the election of officers took place with the following result:

President—Dr. R. R. Washburn, of Waldron.

Vice-President—Dr. E. M. Leach, of Shelbyville.

Secretary—Dr. T. C. Kennedy, Shelbyville.

Treasurer—Dr. Inlow, of Cynthiana.

Board of Censors—Dr. J. W. Green, Shelbyville; Dr. F. F. Whetzel, of Morris-town, and Dr. J. W. Snyder, of Fairland.

Delegates to American Medical Society—Dr. T. C. Kennedy, Dr. E. F. Wells, and Dr. F. F. Whetzel.

Delegates to State Medical Society—Dr. Morris Drake, Dr. J. R. Jenkins, Dr. W. G. McFadden, Dr. T. R. Rubush and Dr. I. W. Trees.

“The Doctor in a Court of Law,” was the subject of an essay by Hon. K. M. Hord. Judge Hord took the ground that doctors will make a great mistake in trying to secure legislation for the compensation of medical expert witnesses. He considers that the medical profession are as much in-

debted to the commonwealth for good government as any other class of people, and should, therefore, willingly come forward and testify in all matters of dispute at issue in courts of law, just as other citizens do. The Judge recounted some points in his experience which tended to show that the medical expert witness generally testifies in favor of the side calling him into court, and that his expert opinion is generally in the nature of an egotistical assumption of knowledge he does not possess. In fact, the Judge handled the medical expert witness as he has known him personally in court in such a realistic manner that Dr. I. N. Love, of St. Louis, in the course of his discussion of the essay, acknowledged the justice of Judge Hord’s position, admitting that inasmuch as a doctor is not required to sit as a juror, nor to be personally in court in ordinary cases, he should not expect greater compensation than the real value of his services. He thought there were many questions the medical expert might be called upon to elucidate which were in the nature of confidential communications, and the courts ought to respect the delicacy of this position; he would not deny that doctors might be found posing before communities as expert witnesses in courts of law, who, in fact, possessed but a very small amount of medical knowledge, in many cases below mediocrity. The medical expert witness, he felt free to admit, had become a proper object of ridicule on account of the facility with which he pronounced certain well known criminals irresponsibly insane. This particular feature of medical expert testimony had become opprobrious to almost every intelligent community in the United States, and he felt, therefore, that many of the strictures in Judge Hord’s paper had been merited. He believed the profession should take some steps towards a limitation, if not an entire blotting out of this evil.

Dr. Sexton, of Rushville, thought the medical witness should receive compensation commensurate with his sacrifice of time

and the value of his technical information given to the court.

Following this was a paper on "Ocular Reflexes and their Successful Treatment by the Correction of Errors of Refraction and Accommodation," by Dr. John E. Harper, of Chicago. (Dr. Harper's paper appears in another part of this issue).

"Induction of Premature Delivery in Contracted Pelves," by W. H. Taylor, M. D., of Cincinnati. Dr. Taylor viewed the literature of the subject somewhat briefly, and concluded finally that the forceps, though sometimes necessary, should not generally be employed in the delivery of the after-coming head. In preference to craniotomy, dismemberment or crushing, he would recommend either the caesarean section, or the modification of that operation suggested by Porro. He felt our knowledge of the toilet of the peritoneum, as evinced in the superior success of laparotomy, gave us a far safer means of relief to both mother and child than we formerly possessed, and he would under no circumstances again entertain such a monstrous proposition as that of craniotomy. In fact, he looks upon Porro's operation and the caesarean section as being not only justifiable but comparatively safe proceedings.

Being called upon to discuss the paper, Dr. John Moffett, of Rushville, said, in his long experience of more than fifty years, he could recall no more than two or three cases of contracted pelvis. He felt that his experience though extensive had been amongst a class of people almost absolutely free from rachitis and other causes of malformation of pelvis; he did not deny that in cities opportunities were not infrequent for the study of the questions raised by Dr. Taylor. In a comparatively newly settled territory and amongst a class of well developed, enterprising, thrifty people, neither the caesarean section nor the Porro operation might be called for, even in busy practice of half a century.

Dr. Payne remarked that he fully en-

dorsed the sentiments expressed by Dr. Moffett; he had seen two cases in all his life where contraction of the pelvis offered a complication to the progress of parturition. He looked upon the forceps as an instrument of great danger to the after-coming head, and would resort to their use in the last extremity only.

PRESIDENTIAL

ADDRESS.

BY

J. G. WOLF,

M. D.,

MORRISTOWN.

Gentlemen and Members of the Shelby County Medical Society:

It is truly gratifying to me to be able to meet with you on this, the first anniversary of our association, and also to meet so many distinguished representative members of the profession from surrounding cities and States. And it is an especial pleasure to me to be able to congratulate you on the peace and harmony that have prevailed, and the amount of work that has been accomplished in our organization during the past year. All of which gives us an assurance that our society has come to stay.

I had thought of presenting a paper of some length on this occasion, but after examining the programme I felt that after hearing so many able papers read and discussed, any lengthened remarks from me would be out of place, and an infliction unbearable under the circumstances. I shall, therefore, merely give you a hasty sketch of the country doctor of Shelby county, in the fifties as compared with the present.

At that time we had no country drug-stores; the doctor had to be his own pharmacist—had to prepare his own medicines, make his own tinctures, pills and powders—in fact, had to keep a respectable sized drug-store in his office.

His visits in the country were made principally on horse-back, with a well stocked pair of pill or saddle-bags. About six months out of the year no wheeled vehicle could be used. The doctor in rubber boots, oil-cloth overalls and coat, would mount his

horse, plunge through the swamps and brush as far as he could safely do so, hitch to a convenient sapling, shoulder his pill-bags, coon the logs as far as possible, and wade the rest of the way to his patients, fortunate, indeed, if he was not compelled to swim a swollen creek or river before his day's work was done, there being no bridges in the county north of Shelbyville.

In the summer and autumn, when we had good roads, what a luxury to mount into a high-wheeled sulky, made high for convenient fording, and go humpety-dump over the corduroy roads, made by placing logs, twelve to twenty-four inches in diameter, side by side, across the hitherto impassable places, and the majority were of that kind. After a pleasant day's ride of twenty or thirty miles over the afore described roads, the doctor might feel slightly fatigued and sore, but then he had the pleasing reflection that it had kept him wide awake and that he was in no danger of becoming *liver-grown*.

Then think of the enormous fees charged for our services! Prescription and medicine at office, twenty-five cents; visit and medicine in town, fifty cents; visit and medicine one mile in the country, seventy-five cents; and twenty-five cents for each additional mile. Three dollars for obstetrics anywhere within six miles, and other services in proportion.

Now, gentlemen, you see how it is that we old moss-back doctors have all become independent and able to retire upon the proceeds of what we owe. But even in those bright and palmy days we, in the north part of Shelby county, had a very respectable organization in which we had many pleasant meetings discussing medical and social topics. It was not only instructive, but it served as a bond of fellowship, uniting us as a band of brothers. Many an instance occurring therein will be an oasis in my memory till time with me shall cease to be. Of that time-honored society, I believe there are but three members now living in the county—Drs. Green, Adams, and your

humble servant, the majority having gone to enjoy the rewards of a well-spent, honorable life.

During the summer and autumnal months, our diseases were mainly malaria, intermittent, bilious, remittent and malignant congestive fevers, and an occasional case of milk-sickness—the latter two now unknown to the profession. We had our bowel troubles as at the present time. In the winter and spring we had to deal principally with pneumonia, pleurisy and rheumatism. Typhoid was just putting in an appearance. Those two dreaded diseases, diphtheria and cerebro spinal meningitis, were unknown to us. Diseases generally were of a more sthenic type, and depletion by the lancet and antimonials were a common practice. Physical diagnosis was comparatively in its infancy. But why dwell on ye olden time? The world do move and we live in a fast age.

When I commenced the practice of medicine in forty-nine, we had but few railroads. The telegraph and the telephone were yet in the womb of time. Now we cross the continent in fewer days than it then took months. We read in our morning papers a full account of all important matters transpiring on the Eastern continent hours before they are said to have occurred. Our country roads are mostly graded and graveled, and the doctor can drive his phaeton farther in a couple of hours than the old-time physician could in a day. But with all the improvements of the times, medicine, with its allied branches, has kept fully abreast.

Thanks to our enterprising manufacturing chemists, instead of the nauseous pills, powders and decoctions, we now have the fine chemicals, extracts and elixirs, pleasing to the eye, pleasant of taste and smell.

The advancement in our means of diagnosis is so great that I am at a loss to know where to commence enumerating them. The stethoscope, laryngoscope, ophthalmoscope, clinical thermometer, speculum and gaseous enemata in abdominal lesions, all of com-

paratively recent date, and last, but not least, the advancements made in microscopy and chemistry as aids to diagnosis, come near removing the practice of medicine out of the regions of theory and placing it among the exact sciences. In the department of surgery perhaps the greatest advancement has been made. By the aid of anæsthetics and antiseptics, the surgeon's knife has lost its terror, and the surgeon of to-day thinks no more of performing a laparotomy than the old-timer would of amputating a finger.

However pleasing it would be to me to go on enumerating more elaborately the various improvements and advancements made in the different departments of our profession, time admonishes me to stop.

Gentlemen of the Shelby County Medical Society, to you I return my unfeigned thanks for the honor you have conferred on me in selecting me as your president, and for the courteous treatment and generous support given me while presiding over your deliberations during the year just passing.

The hour for adjournment having arrived the society and its invited guests assembled in the banquet hall of the Ray House. The retiring President, Dr. J. G. Wolf, occupied the high office of Symposiarch. The following order of exercises was observed throughout:

OUR GUESTS.

'Tis meet
We greet
And seat
Each honored guest
Within our midst.

Response by Gen. John W. Vannoy, Mayor of Shelbyville:

GENTLEMEN.—Officially representing the city of Shelbyville, and reflecting the hospitality of her free hearted and open-handed citizens, I bid you welcome to open doors and open hearts. We are proud to have in our midst so distinguished a body of representatives of the healing art as I now address. Numerous cities of widely separated

States are here represented by men renowned in their profession; men whose names are everywhere known and honored for their achievements in the science of medicine. Those of our own city and county are known and loved of us, and while we may not speak of their fame abroad, yet we well know their worth, and their just deserts are much; therefore we do them honor and greet them as tried and dearly loved friends. Personally it affords me the greatest pleasure to extend a hearty welcome to this distinguished body—one and all—strangers within our gates and those who go in and out among us every day. No act which the partiality of my friends and neighbors has placed within my province has given me more sincere pleasure in the doing than in the greeting and bidding you welcome to the city of Shelbyville.

MEDICAL LITERATURE.

The facts and theories regularly unloaded,
And with each cycle as regularly exploded!
Response by Dr. Dudley S. Reynolds, Louisville.

"The facts and theories regularly unloaded, and with each cycle as regularly exploded," undoubtedly characterizes the doctrinal period of medical literature, which, happily for mankind is happily fading away before the constantly increasing lights of experimental science. Periodical medical literature, taken as a whole presents more varied features of interest to the reader than all the rest of the domain of literary composition known to intellectual man. Some men write to invite discussion of unsettled questions; some men write to exhibit the extent of their reading; some men write under the pretense of overwhelmingly large experience in a certain line of practice; other men write to advertise themselves as the busiest practitioners and the most industrious and able discoverers of new devices in surgery and new observations and methods in practice. Other men write to present the contents of well known text books in contrast with the views expressed by some writer on pathology, aetiology, etc. Dr.

Campbell has written a book to present his knowledge of the language of medicine; Dr. Cathell is the author of a work entitled "The Physician Himself," in which he has at great pains set forth the personal character and peculiarities of a young and impetuous member of the profession; whilst Dr. Smythe, of Indianapolis, contributed a volume on "Medical Heresies." A gentleman in Ohio is engaged preparing a work on the medical science contained in the Talmud. You are familiar with the recent publication of a work entitled "Shakespeare as a Physician," likewise with the "Obstetrical Antiquities," by Engelman, of St. Louis.

Now, as to the great variety of topics presented to the reader of periodical literature, there is absolutely no limit in subject matter as well as variety of treatment. Whilst Ephraim McDowell in about six pages presented to the world for the first time an account of five cases of ovariectomy, it takes Dr. Wackerhagen, of Brooklyn, about four pages of the *Brooklyn Medical Journal* to lay down all the principles of operative surgery in general.

Now, the importance of all these matters at once suggests the danger of having them lost to the student by an unfortunate choice of titles and the want of proper classification as to the subject matter. Nothing is more common in periodical literature than such titles as these. "A Clinical Lecture," or "Clinical Observations," on half a dozen subjects, may be; "Cases in Practice, by a Country Physician;" "Surgical Chips," and other such absurd titles to articles, many of them containing new and important original matter. The evils growing out of the awkward choice of titles to essays and clinical contributions have grown so great and are so generally recognized, that editors occasionally ignore entirely titles presented by authors and undertake the serious business of giving a proper designation to the subject matter of papers. It is an unfortunate habit likewise, of some writers to choose a

prominent symptom common to many forms of disease as the title of an essay intended to disclose the superior merits of some newly discovered therapeutical agent. Like all important enterprises the business of journalism has little or no relation to its strictly professional features. It may be truly said there is a large element of human nature displayed in the medical literature; some men have the habit of talking with great facility upon any given subject and never making a point; other men, with halting speech and badly chosen words, manage to present their views in such striking form as to arrest universal attention. These, gentlemen, are not the gifts of language merely, they are the results of educational training. A man who chooses his language unhappily is not to be considered a dullard, incapable of entertaining a good conception; on the other hand, he is not the most brilliant genius who has cultivated the refinements of accurate speech. So the best observer in any field of experimental research is often found absolutely without the power of presenting in proper form the results of his labor.

The editor of the *Journal of the American Medical Association*, about two years ago wrote a scathing rebuke to those reporters of medical society proceedings who sit down and write something like this: "Dr. Brown, of Simpsonville, read a very learned and interesting paper on the Pneumonia of Infants, at the conclusion of which he was greeted with loud applause. The essay was discussed by Dr. Jones, of Russellville, Dr. Alexander, of Milltown, and others." Now you see, of course, such a report conveys absolutely no information. What the reader of periodical literature wants is a circumstantial report of the facts presented in the essay, "Infantile Pneumonia," and the points presented in the discussion by each speaker.

Gentlemen, I crave your pardon for indulging in this free criticism upon this subject, which, as each of you knows, engages

a considerable part of my time, and, whilst we all know the banquet hall is not the best place for fault-finding, it must be admitted an important truth may be stated anywhere. I am not insensible to the fact that men of the strongest convictions, the most lofty and honorable purposes, hopelessly disagree upon the very questions you have honored me with the opportunity of discussing in your presence; yet I beg you all to give this subject a more careful consideration. Write your clinical observations in plain language, without reference to what others may have said upon that or other kindred subjects, and send them to medical journals for publication. Introduce as little superfluous matter as possible and you shall find your reports, written in this manner, copied into all the best medical journals of the world.

To those of you, therefore, who seek to give to posterity some evidence of the earnest devotion with which you prosecute your professional labors, take notes on the spot of every important observation you make, formulate them and give them to your brethren, who are justly entitled to share with you all the knowledge you possess, and they will honor you for the work you perform.

CHARITY.

On those who feel
The iron heel
Of Poverty, as it grinds them down,
For sweet Charity's sake,
Oh Healer! pity take.

Responded to by Dr. J. L. Thompson, of Indianapolis.

There are two definitions concerning this word, which call for consideration. First, the bestowal of one's time and means on the poor and distressed. With this physicians are well acquainted. Often it is overdone and we make paupers of those who are able to bear their portion of at least a part of the burden. Public clinics are often resorted to by persons well able to pay a moderate fee for the services of our profession. In the treatment of such persons

gratis we do our fellow practitioners much injury as well as the patients whom we serve.

Again, some suppose that when they are treated for nothing that they are really conferring a favor on some one; that we are "practicing upon them to benefit ourselves," or that we have some sinister motive in so doing.

Again, it is just such cases where one may expect suits for mal-practice. Rarely do they arise in the reputable ranks, when the patient expects to pay the surgeon for his services. But in spite of these drawbacks the physician must exercise judgment and must not seal his heart against the worthy poor because of these ungrateful wretches. One must so conduct himself that when called upon to relax his hold upon the things of this world he may wind up his affairs with a conscience void of offense.

In not a few instances the thanks of our grateful patients are far more sweet to us than are the largest fees.

But we may give all our time to the poor "and our bodies to be burned, and yet if we have not that other charity we are but sounding brass and tinkling cymbals."

I once knew an Ishmaelitish doctor who never was happy until he got every one in his town out of his State Medical Society.

From this pleasant gathering on the first anniversary of the Shelby County Society, I infer that you are exercising that broader charity which has been so beautifully portrayed by St. Paul. Long may you live to enjoy the fruits thereof.

THE HOOSIER SURGEON.

Doc! yur'e wantid quick! Biler's bustid!
Tom Jones' head's blow'd off! And I just did
Git away. Bring yure insterments, he begs,
Kase you'll have ter ampertrate his legs.

Response by Dr. Joseph W. Marsee, Indianapolis.

MR. SYMPOSIARCH AND GENTLEMEN.—In the early history of this as of other States the first of the professions to be represented was that of medicine. No sooner had the hardy settlers made a clearing in the forest and collected a few cabins together for mu-

tual protection, than the Hoosier Doctor was found in their midst, ready to minister to them in accident and disease. This was before they became civilized enough to need the Hoosier Schoolmaster, before they even took time to consider their spiritual shortcomings and issued a call for the Hoosier Preacher, and long before their vices grew rampant enough to make necessary the presence of the last of that notable quartette, the Hoosier Lawyer.

We Hoosier Doctors of to-day are vain enough to consider ourselves as among the best dressed, best behaved and best informed men in our respective communities. Professional purposes, ambition and devotion are always the same; in personal appearance and habits, however, we no more resemble the medical man of that period than the sportsman of to-day, clad in his corduroy suit of many pockets, with his hammerless gun and cartridge belt, is like the mighty hunter of that day, with his long rifle, his powder horn and his patches. Our remote professional ancestor was a rough man; rough in his dress, his speech, his habits, and often in his practice. The wall of no college had felt the friction of his back. His library consisted of a Bell's Anatomy, Richardson's Physiology, Eberli's Practice, Gibbon's Surgery, and perhaps a work on obstetrics equally ancient. His surgical armament comprised a spring lancet and a few general purpose knives, possibly an amputating case and a "Jarvis Adjuster."

But he brought to the bedside of his patient such courage, tried and proved by the thousand dangers to which his rough life subjected him, such facility of invention and fertility of resource, born of necessity and strengthened by daily use, such self-reliance, from a consciousness that no aid could be obtained, and above all, such a thorough knowledge of the people among whom he lived and practiced, that I question whether these did not more than make up for his want of technical training. He got closer to his patients than we do to-day,

knew less of books but more of human nature. There was little to encourage the Hoosier Doctor of those days. His life was of the hardest, the people were poor and his chances for fortune or extended reputation were slight indeed; and yet "there were giants in the earth in those days."

Practicing medicine all over this and other States were men who had great talents under rough exteriors, men who if living to-day, would find their level only among the very foremost in the profession. From this class came the professional leaders of half a century ago; men who founded great medical colleges, whose lectures were attended by throngs of listening students, anxious, like Saul at the feet of Gamaliel, to be "taught in the perfect law of our fathers."

Upon this foundation rests the fabric of Hoosier medicine and surgery. From the beginning of the State's history until the war of the rebellion, the progress of the surgical part of the profession was constant but slow. Marked advances were few, but when, by the imperfect means of diffusion of knowledge in vogue in early days, was made known some discovery in surgery, it found a profession willing and anxious to adopt it. The late war found the Hoosier surgeon a man of theory rather than practice; with a people rather of an agricultural than a manufacturing turn; with no large cities full of clinical material; with no large hospitals; with a railway system yet in comparative infancy, his field for operative surgery was limited. The war supplied his needs in this direction. Though our surgeons went into this field comparatively untried, and though they were brought into competition with some of the best men of the Eastern States, men of age and experience, the high rank which the Hoosier Surgeon took and maintained in this conflict, should be a matter of State as well as professional pride.

Especially favored are we who have entered the profession within the last twenty

or twenty-five years. With our elder brethren, whose whitened hairs, seamed faces and bowed forms tell of the "burden and heat of the day," we are basking in the brightest light ever seen since the very birth of surgery; but unlike them we are enjoying an unearned blessing.

We live in a glorious time, a time so full of surgical discoveries and advancements that all past time seems a "dark age" beside it.

And, therefore, looking at the past with a heart full of gratitude to the noble men the fruits of whose labors we now enjoy, looking at the present with a heart full of thankfulness that we have been permitted to come into so goodly a heritage, looking at the future with a heart full of hope that there may be yet in store for us a time immeasurably better than the present. I am proud to stand before you as a representative of the honorable Hoosier Surgeons of to-day.

THE CLERGY.

His lay
Each day:—

The beauties of heaven.
The goodness of God,
The straight, the narrow way.

*Response by Rt. Rev. F. S. Chatard, M. D., D. D.,
Bishop of Vincennes, Indianapolis.*

GENTLEMEN:—In rising to respond to the toast—"The Clergy," permit me to thank you, first, in the name of the Reverend Clergy of all denominations for this mark of consideration and good will on your part; and, secondly, in my own name, for the honor you have done me in asking me to be with you to-day. You know I have been one of you, and I have never ceased to value the diploma given me by the University of Maryland, when, in 1857, I terminated my course of study in her medical school. A fact like this brings up the past, and the venerable figures of Nathan R. Smith, of Samuel Chew, of Joseph Roby, of Richard H. Thomas, of W. Aiken, and of that worthy Dean of the Faculty, and, I believe, of the medical profession of Balti-

more, still living, Prof. George Miltenberger, seem to present themselves to me, and as a docile student I hear their fluent and learned words. It is true I deemed it my duty to alter my course; but I have never ceased to cherish the memory of my professors, and to be grateful for what they taught, which, notwithstanding change, has had its influence morally and sometimes in the physical order.

I am, however, identified with the work of the clergy, and I have just a suspicion that my dual character as an "M. D." and a "D. D." has suggested to your excellent committee the thought of calling me hither to speak for the clergy. How willingly I do so it is not necessary to say; the theme is a noble one. While the physician is called to minister to the material element in man, the priest is there to attend to the wants of the soul. As the body and the soul are in harmony the one with the other, so the physician and the clergyman should be as one, working hand in hand for the welfare of the sufferer. There surely should be no antagonism between them. Bear with me a moment, if I ask why any antagonism should really exist? That I have heard of it, read of it and experienced it sometimes, is a fact. But it is a fact that should not have existence. Allow me briefly to say why. I believe it is founded on two grounds—materialism and its tendencies; and, secondly, a persuasion that ministrations of the clergy are not only of little benefit spiritually to the patient, but sometimes hurtful to him from the point of view of physical well-being. The Oxford professor, Mr. Green—the "Professor Grey" of "Robert Elsmere," while himself scattering to the winds the supernatural, takes the materialist to task for denying the spiritual element in man, because he cannot demonstrate it positively, that is, by his scientific processes.

But there is a stronger reason than that. Prof. Tyndall says: "If matter moves, it is force that moves it." And again: "All force is reduced to push or a pull in a straight line." It is well known that when

two forces are acting on an object the resultant is necessarily the diagonal between the two; this as a matter of course tending in the direction of the more powerful of the two. This action being necessary, and matter moving only by force inherent in it, whether we call it gravity, or cohesion, or attraction, or repulsion, it follows as an absolute consequence that the action of the body, which according to the materialistic view has no spiritual element in it, proceeds necessarily. If a man act of necessity, he is not free. Freedom being essential to responsibility, it follows that he is not responsible. Yet the whole legal system of the world is built upon the fundamental truth of man being a free agent. In the hypothesis, therefore, of the materialist, all law is useless, and penalty a cruelty. Such is the exact result of a system which counts no small number of adherents among the medical profession. No one knows better than I do the wonderful phenomena of matter that tend to mislead in this. Often have I studied those of reflex action, the action of "voluntary" muscles, the contractile powers of plants. Interesting, beautiful, mysterious! But because they cannot be fully explained, not for that are we to cast aside what the mind of man always, everywhere, has held—the existence of the soul, for which militate reasons, so convincing—reasons which I will not detain you in enumerating. When we do succeed in unraveling these phenomena, do we not find them "pushes" and "pulls" in a straight line, and, therefore, a necessary action? Can we not find analogous action in electricity for example, such as almost to make one think himself a kind of torpedo fish or electric eel? What more absolutely necessary and not free in its action than electricity? We speak of it as having freaks; but this is the language of the people, not of the man of science. We cannot therefore escape the dilemma—a man has a soul or he has not; if he has, the soul presides, controlling and directing action, and

the man is a free agent. If a man has not a soul, then he is not a free agent, and law with its sanctions is worse than a mistake. On the other hand, if we put ourselves in harmony with the human race in this matter, believing in the existence of an essence not made of parts, not material, but simple and spiritual, quickening and ruling the human body, forming the human composite, we do two things, one beneficial to science, the other placing the foundation on which consideration for the clergyman rests. Science—medical science—is benefited; for to ignore the commerce between the soul and the body would, as any experienced therapist will tell us, be fatal to success in treating disease. A foundation for the standing of the clergyman is given, because his work is primarily with the soul, secondarily with the body. Scientifically it would seem therefore that the physician and the clergyman are mutually necessary to each other in the care of their fellow-men.

But I trust I am not mistaken in saying that this view, which I deem correct, is far too narrow to cover the very exalted relation that should exist between the physician and the clergyman. Above the physical order is the moral, and in its preservation they are the guardian angels of the household—the one protecting that order by fatherly admonitions of the penalties which its violation visits on the body, affecting even the faculties of the soul; the other presenting the lessons of divine wisdom, and the beautiful hope of the life to come. As we see them standing by the bedside of the sufferer, their looks betoken the heartfelt interest they nobly feel in the man who trusts to them his bodily welfare here, and his spiritual hopes of the hereafter, each receiving the grateful glances of him who is consoled by their presence, we feel that we are contemplating two of the greatest works of a loving Father-God, the one who heals the body, and the one who ministers to the soul. If the Holy Word bids us honor the physician on account of our need, for a still

greater reason are we to honor the representative of God, who not with wisdom that is his, but with that sent from above, acting in the name of his Master, enters the house of pain to bring solace and strength and hope of happiness beyond the grave; who, clad in the influence of his holy calling, comes with God's blessing upon him, which, while it throws its halo around him, makes fruitful his words in high and noble and virtuous resolves.

Gentlemen of the Medical Society of Shelby County, you have not only my thanks and the thanks of the reverend clergy of every Christian denomination, but our best wishes for the prosperity of your association, and for a long career of continued usefulness for each of you. Allow me again to thank you for this mark of honor to the clergy and for your courteous attention.

THE FUTURE OF MEDICINE.

Ah me!

I see,

In dim futurity,

The wonders there will be.

Response by Dr. Isaac N. Love, Ex-President St. Louis Medical Society, St. Louis.

WORTHY SYMPOSIARCH AND GENTLEMEN:—The theme assigned me is an inspiring one, but the time appropriate to its discussion in an after-dinner speech is so limited that it would require a more able spokesman than myself to do it justice. "The Future of Medicine," "Oh! would that I could the perfect picture see, in dim futurity, the wonders there will be." There can be no better indication of what the future has in store for us than a contemplation of the past and a complete appreciation of the present.

If we glance back down the aisles and corridors of time, our eye stops at the milestone, placed in position by the heroic character of Hippocrates, a member of the school of *Cas*.

He who was a lineal descendent of Esculapius, and who flourished at one of the most memorable epochs in the intellectual de-

velopment of the human race, the latter part of the fifth century, before the Christian Era.

He had for his contemporaries, Pericles, the famous statesman; the poets Æschylus, Sophocles, Euripides, Aristophanes, and Pindar; the philosopher Socrates, with his distinguished disciples, Plato and Xenophon; the venerable father of history, Herodotus, and the young rival Thucydides; the artistic Phidias, with his illustrious pupils, and many others who have conferred immortal honor on the age in which they lived, and exalted the dignity of human nature.

Confucius and Zoroaster had gone off the stage only a few years before the arrival of the Father of Medicine, so there must have been some occult influence at work in this age of remarkable intellectual and moral development.

As we rapidly pass on from the days of him whom we acknowledge as father, we find a record for the profession of which we may well be proud.

The evolution was gradual, but it was constant, though ever and anon a century would pass without any marked accomplishment. However, it will be admitted by the student of history that medicine kept pace with the general advancement of the human race.

It is unquestioned that Hippocrates raised medicine from a system of superstitious rites, practiced wholly by the priests, to the dignity of a learned profession. Who will not admit that he builded wisely when he announced it as his belief that disease could be chiefly referred to two causes—climate and diet.

It is idle to trace the record closely, but no one will deny that advancement has been more rapid during the past century than during the previous ten, and the two decades just closing are the red letter period of the profession.

At the present time we certainly have much that is practical and valuable. I might burden you with a reference to our

anatomical and physiological knowledge, the present classification of disease, and the appropriate remedies for each,' but you may congratulate yourselves that I have not the heart so to do.

Through the efforts of our Cohnheins' Virchows, Kochs, Pasteurs and the rest of the brilliant bevy of bacteriological breeders, the various germs, which are the causes of the diseases we are called to treat are being so thoroughly classified and understood that their complete corallment is only a question of time, having been duly labeled their recognition will be easy.

By means of the untiring zeal of our bedside clinicians and the laboratorial delvers in the depths of experimental therapeutics, the specific enema of the individual microbe may, let us hope, be discovered.

Sanitary science (and in this connection be it remembered, that to the medical profession does the world owe all its knowledge of sanitation) is more and more every day demonstrating the fact that disease is almost entirely preventable. Unless we forget, or fail to apply what we have learned, never again will we see communities devastated by scourges like cholera, typhus, and the black plague.

A mere glance over the pages of the history of medicine, and a momentary contemplation of our present status, is enough to arouse the enthusiasm of the most phlegmatic member of the profession; but to one of a sanguine temperament the effect is enthusing, and it prompts optimistic hopes of the future.

When in the city of Washington a few years ago, I remember the remark made by a prominent, much-traveled gentleman whom I met, a resident of Baltimore, regarding the capitol city.

Said he, "Washington to-day is the most beautiful city on earth, and I wish I could live one hundred years that I might see Washington then." So I feel with regard to the future of medicine—would that I

could live a hundred years to realize her possibilities.

I may well say I leave the praises unexpressed, in the words that bring myself relief, I leave the greatness to be guessed. But I fain would present you that picture which I see as I look out upon the horizon of the future, a mystic and colossal figure appears. She stands firmly, and one capable of wrestling successfully with the difficulties about her. Her hand is outstretched in a manner suggesting helpfulness, and as though it were wielded by muscles of steel which were under full command, and yet there is a delicacy in the outlines indicative of a touch like velvet. Her glorious form is expressive of strength, refinement, each and every line of the figure graceful as a gazelle.

Her skin soft as infants with the peach-blow hue of health, 'neath the pearly depths of which the rich and radiant blood, full of the life-giving hæmoglobin courses merrily, the complexion enunciating that which is clean, pure and chaste as the icicles which hung on Diana's temple. Her billowy breasts bared to the world, warm and throbbing with sympathy for its sorrow.

Her head of classic shape indicating intellectual attainments of a high order, bent upon a swan-like neck as though in meditation, wreathed in massive tresses of royal gold, each and every filament reflecting a light all its own setting forth in a splendid way the bivable power of its possessor.

A face, seen once, never to be forgotten, clean cut as a cameo, the arrangement of the various features orderly, the proportions perfect.

A nose anatomically correct, and gracefully endowed in a manner to perform its physiological duty. A jaw manifesting power and an inability to shirk.

A mouth topographically ideal, with lips full of affection's curves, and a capacity for benign firmness.

Eyes of midnight blackness, born to command, from which a melting tenderness beams forth that could conquer into gentle

acquiescence the most stubborn follower, and a charity as big as the world and as broad as humanity.

Slowly she raises the God-like head and a winning smile plays over her lovely face; her lips roseate and luscious as ripened cherries waiting to be plucked, peart, and in a voice tender and persuasive, sweet as the gentle Juliet speaking to her lover, there floats out upon the wings of the wind the words:

"Work while it is yet to-day, for the night cometh when no man can work."

After a pause, again is quietly spoken:

"We mingle with suffering man, matron and maid,

In joy and in sorrow, in sunshine and in shade;
Let the trinity which directs us continue to be—
Science, Humanity, Charity."

Again the soft and purling voice breathed out in tender accents:

"Come, wander with me, my children,
Into regions yet untrod;
And read what is still unread,
In the manuscripts of God.

"And we'll wander away and away
With *Nature*, the dear old nurse,
Who'll sing to us night and day,
The rhymes of the universe.

"And whenever the way seems long,
Or our hearts begin to fail,
She will sing a more wonderful song,
Or tell a more marvellous tale."

As the last notes echoed out in the stillness of the night from the lips of the glorious creature, there gleamed through a rift in the clouds at her feet in glowing characters the legend—

"*The Genius of Medicine.*"

THE BENCH.

Threads of proof, light as air,
Gently tip the golden beam,
When held by Justice fair.

Response by Hon. L. J. Hackney, Judge Shelby Circuit Court, Shelbyville

GENTLEMEN OF THE SHELBY COUNTY MEDICAL SOCIETY:—It is with pleasure that I re-

spond to the toast proposed, though I confess that the relationship of your profession to the bench is so remote that I have been perplexed to define it.

In taking a retrospect of the field of my personal observations, I recalled one incident associating the professions of medicine and law. Two young men fresh from the moulds of their respective colleges joined in one office and hung out one sign:

"MEDICO-LEGAL"— } Dr. A. B.,
 } C. D. Att'y.

Death, that poor rival of Dr. Hornbrook, so soon dissolved the firm that it was never learned whether the terms of co-partnership required A. B. to provide estates to settle while C. D. should make the settlement. Mutuality could hardly exist without some such reciprocal obligations, or such as existed between Damon and Dr. Crateas:

"Damon who plied the undertaker's trade
With Dr. Crateas an agreement made:
What linens Damon from the dead could seize,
He to the doctor sent for bandages,
While the good doctor—here no promise breaker,
Sent all his patients to the undertaker."

While death spoiled the sign of the doctor of whom I have spoken, there was another doctor, of whom Charles Fallen Adams has written, whose professional sign was destroyed by the cruel wit of an unfeeling son of Erin. He was

* A doctor of limited skill,
Who cured beast and man,
On the "cold water" plan
Without the small help of a pill.

On his portal of pine,
Hung an elegant sign,
Depicting a beautiful rill,
And a lake where a sprite
With apparent delight,
Was sporting in sweet distabille.

Pat McCarty one day,
As he sauntered that way,
Stood and gazed at that portal of pine—
When the doctor with pride,
Stepped up to his side,
Saying, "Pat, how is that for a sign?"

"There's wan thing," says Pat,
 "You've lift out o' that,
 Which, be jabbers! is quite a mistake.
 It's trim and it's nate,
 But to make it complate,
 Ye should have a foine burd on the lake."

"Oh! indeed, pray then tell,
 To make it look well,
 What bird do you think it may lack?"
 Says Pat, "Of the same,
 I've forgotten the name,
 But the song that he sings is Quack, Quack."

The bench is often called upon to weigh, in the scales of justice, a disciple of Esculapius. In actions for malpractice or involving questions of mental capacity the best talents of your profession are called forth, and the judge is required to say to the jury that the evidence of an expert is not to be received necessarily to the exclusion of non-expert evidence.

Imagine, if you please, the Goddess of Justice suspending the balance, with a clear-minded, cool-headed specialist in mental diseases, sitting dangling his legs at one end of the beam, and upon the other a "moss-back" who applies pump-water for batts and "spunk-water" for blind staggers; and then think that civilization permits the jury, that great arbiter of human rights, to pull down the veterinary end of the beam.

The science which underlies this doctrine is possibly too deep for your comprehension, nevertheless the science is so read.

There is one instance in which the bench is, very prudently I think, made the guardian of privileges entrusted to the eyes and ears but not the tongue of your profession. The doctor, when he enters the sick chamber in his professional capacity, is entrusted with confidences more sacred than are given to any mortal save the husband; confidences, which, if violated, would justly banish from the profession the most skilled. He freely assumes liberties which, if another attempted, would be an insult demanding punishment but little short of death. Such confidences he may not divulge even in a

court of justice. His observations, visual and digital, are classed as *privileged communications* together with any statements of the patient, and are so carefully guarded by the courts; that often when the ends of justice seem to demand that the lock be broken, the privilege is maintained.

Your profession generally, I believe, labor under the erroneous impression that this guardianship is for their protection, and that they may exercise the option to expose or retain the occurrences of the sick room. It was created for the protection of the patient and to inspire that confidence, that secrecy would be maintained, which would lead to a full exposure to the physician of the most minute details of the disorder.

There is no choice with the physician but to maintain inviolate the seal of secrecy. But the patient is not required to observe the same rules, and may, expressly or impliedly, waive the privilege and thereby open the way for the physician to properly divulge his knowledge. The seal of secrecy is placed upon the lips of the physician and is held there, by the law, to be broken only at the pleasure of the patient. It may be broken by a suit against the physician for malpractice or by calling the physician as a witness on behalf of the patient, and, of course, by expressly consenting thereto.

There is similarity in the positions of the physician and of the judge upon the bench in responding to that demand of duty to render judgment upon stated facts. While decision with the one involves life and death, with the other it is generally but a question of financial or property interest and vastly the less important.

At a recent meeting of doctors, at which some of you were present, Bill Nye was an expected guest, but by some mishap dislocated his engagement. He telegraphed his regrets, and closed by saying: "May you continue to take life with the ease you have in the past." It occasionally happens that a life is taken by judicial process and possibly the astute student of your profession

may find slender threads of kindness between that profession and the bench in the cruel case with which either may take life.

THE SUCCESSFUL PHYSICIAN.

If thou desirest worldly pelf,
Oh Physician! *heel* thyself.

Response by Dr. G. V. Woolen, Late Secretary of Indiana State Medical Society, Indianapolis.

What is success for a physician?

I would answer, that in making himself the most useful to his fellow-men in the relief of their sufferings, he must have secured to himself the greatest possible good.

There are many things which contribute to the accomplishment of this, but I shall call attention only to a few essentials, though possibly not in the order of their importance.

1. He must have been jealous of his health. *Mens sana in corpore sano.*

One of the saddest things which we are called upon to witness in our battle with disease is a sick and dying brother, bringing so often to a premature close, what would have been a life of great success. This alas, too often is the result of preventable causes.

Lord Chesterfield warned his son against "wine and women," and if he had proposed that he should have become a physician, doubtless would have been equally as specific in urging attention to the bath and the tooth brush.

2. He must have been a student.

We hear too often of "our student days."

The vastness of knowledge to be acquired, the essential need of it at critical times, and the breadth of character secured in its acquisition are stimuli in attaining success, which if appreciated, require a *life time of study*.

We may not hope to escape this necessity by restriction to special lines of study and practice, for here we will find "dark continents" yet unexplored. Once a physician, always a student, is the pathway laid in Mosaics to success.

2. He must have been loyal to his profession.

Medicine is jealous of her votaries. The greatest of philosophers has said, "no man can serve two masters" and gave good and sufficient reasons *why*, in the realm of religion, which are none the less true and applicable in that of medicine.

The preaching doctor, the political doctor, and the trading doctor, together with the various other compounds with medicine, are only to be mentioned for condemnation, if not damnation.

Singleness of purpose, as keeping the eye on the polar star when lost in the wilderness, secures the shortest and surest way to success.

4. He must have secured wealth.

Who is so poor as a poor doctor? Alas, how few of us have good business sense! Only recently a physician died in Indianapolis with one hundred thousand dollars uncollected, and largely uncollectable, because of being outlawed on his ledger, leaving his family with only a pittance. Probably no other avocation shows such poor substantial results for the amount of actual labor expended, as that of the physician.

This means that they are poor financiers. They need not be "trading doctors," but they should be *collecting* doctors, and *investing* doctors. Wealth for wealth's sake is debasing, but it is most essential as a lubricator to the machinery of life. For success one needs equipment and this is not furnished as the manna of old.

5. He must have been controlled by a persistent enthusiasm.

This must have been the outgrowth of the courage of his convictions. We say, "a faint heart never won a fair lady." Many fail of success in life, because of courage to take hold of it.

That enthusiasm which counts not time, nor money, nor labor, and is oblivious to all, except to *master*, is as the mariner's compass, a sure aid to carry one into the port of success.

6. He must have possessed a high degree of moral character.

A base, low bred physician is to be dreaded as contact with the *mustela putorius*. He is possessed of unsavory odors, and is polluting. He who cannot be taken into our most sacred confidence, and deal with virtue as with his heart strings, is never found among the great in medicine. Her inner courts are for "the pure in heart."

How great is the failure of the physician, who after witnessing life, depart from this body, "so wonderfully made" does not seriously contemplate in conjunction with the whence, the whither? And so "number his days, that he may apply his heart unto wisdom."

"For what is a man profited, if he shall gain the whole world and lose his own soul."

THE PRESS.

The happenings of the hour;
The thoughts of the leaders of men,
Vividly portrayed in undying characters
By the Art divine.

Response by Hon. W. Scott Ray, Editor Shelbyville Democrat.

WORTHY SYMPOSIARCH: It is not the mission of the press to invade the privacy and sanctity of the home circle and then proclaim in double-leaded columns and large display type, acts of indiscretion committed under the paternal roof. Scandal mongers at the head of great newspapers, instruct their editorial writers and correspondents that room is made for matter of this description and that it is never crowded out. They don't hesitate to turn happy homes into abodes of despair, mildew the course of life with deadly poison and frequently gloat over the wrecks and desolation which they have caused, in order to be "sensational"—in short, the press is not a sewer pipe and is not in the line of duty, when it stoops to cater to the low and vulgar tastes of the world. In its dealings with parties, the mission of the press is not to support unfit and unworthy men for public office, no

matter if they do come bearing the credentials of King Caucus or flushed with the indorsements of party nominations. It is here that the press can render great aid to the cause of good government and it does not always fail to do so, but frequently it goes out after scalps and succeeds in getting them.

I speak here of the true and sublime mission of the press; its grandeur, its nobility and its duty; but I am reminded of the fact that we don't always practice what we preach, and that modern journalism, like other callings, is prone to selfishness and to worship at the shrine of the golden calf, at the expense of manhood and independence.

Supposed party fidelity and insane adherence to party ties, too often render us blind and we forget that it is not the mission of the press to champion every law or measure which may be pending for consideration. The fearless press should turn the broad sunlight of honest inquiry in this direction, in order that vicious legislation be not enacted. Free the press from the shackles which bind it. Give it the same freedom as the bird in the air; unbar the doors of political servitude and let the hand that guides the pen, move as God intended it should move, for the advancement of mankind. Neither is it the mission of the press to become the sickening apologist for every knave who beats his way into office through false pretenses, or of every rattle-brained statesman who seeks to pose as a party leader. The press should quit making big men out of very small material. It has done enough to this nefarious business and it is time to quit and to ask forgiveness of the American people for this great sin it has committed.

The press performs its greatest mission when it asserts its independence for the good of the whole people; when it becomes an honest critic; when its opinions are not clouded with self-interest or partisan prejudice; when it is not under the shadow of cliques, rings and combinations; when its

utterances, like those of an upright judge, go out void of feeling or malice; when it stands, as it were, with uplifted hands pleading for justice, good morals and honest government. I know that politicians and time-servers are quick to cry out against an honest press, but the masses are honest too, and quick to sustain the liberty of the press when the politicians are most displeased. The American people love an independent press—it is their hope and their safety. They see in it no consuming ambition to reward men with preferment for private gain. They see in it an air of honesty and candor which challenges their consideration and respect. Its utterances go to the people as the results of conviction and not as the sentiments of one talking for pay or the hope of reward. These are the electric lights by which most men are guided to-day. These are the papers which have a wide, marked and potential influence; the papers which make deep and lasting impressions; the papers which enjoy the big circulations in large cities; make fortunes; carry elections; compel obedience to law; mould public opinion; bring about reforms; purify parties; make the world better and the country more prosperous. But the race of the party press is not run by any means, and its influence is not to be underestimated, as it will live until the end of time and never cease to be a great power; but we must look elsewhere to find our ideal of pure, honest, journalistic thought and expression. It can't be found in the old ruts, but in the untrammelled and fearless press, which is greater than presidents, greater than congress, greater than legislatures, greater than anything else, except the American people.

OUR WIVES.

Tempered with merciful kindness and love, the
doctor's wife
Places him fairly, firmly in opportunity's breach,
And bids him wage with vigor and valor the strife
of life.

Response by Dr. Joseph M. Mathews, Louisville.

MR. CHAIRMAN AND GENTLEMEN OF THE

SHELBY COUNTY MEDICAL SOCIETY:—I was gratified at the reception of your kind invitation to be present at your meeting to-day, and feel complimented at being called upon to respond to the toast, "Our Wives." It pleases me to be able to speak for those who are not here to speak for themselves. I have wondered, sir, if *our wives* are different from the wives of other men, and with all due respect to everybody, I am inclined to believe that they are to a degree better than other wives. My opinion is based upon the fact that their surroundings are such as to continually bring out that which is always sweetest in the female character—charity. As much as is our wont to boast of our achievements in life, or our dignity in calling, I say it, sir, with a firm belief that much more than half the credit is due to our wives. They make us—or unmake us—and as I look around me to-day I see only men whose reputations are made, hence I say "our wives" should be thanked.

You old men, go with me back to the time that you first joined hands with your fair bride and begun life in the little cottage in the lane. Everything was bright to you then. The earth looked greener, the flowers smelled sweeter and the birds chirped more merrily than ever afterward. Sitting in her cozy little home one summer's day this young wife of yours was startled by a knock at the door. Going timidly to respond she was astonished to see standing there one of the rich farmers of the county asking where the doctor was. In her innocence she asks if he means John. How she upbraided herself afterwards for this silly question, for of course he meant John. But the farmer is in a hurry and wants an answer. "Yes! No! not at home but at the office." "No," says the farmer, "I have looked all over town for him and can not find him." "But he *must* be there, for he never goes away from his office." "Well," says the man, as he goes out of the gate, "I will have to get another doctor." She looks after him in bewilderment, and as she

retreats into her room she bursts into tears and crys like her poor heart would break. She sobs aloud and says, "Just to think of it; John's first call, and that too to see Mr. Smith's wife, and he cannot be found." As she raises her head she catches a glimpse of John and the farmer riding at a break-neck speed up the road, and she really cries for joy. Night comes on apace and John has not returned. She wonders what in the world keeps him so long. The neighbors come in to keep her company, and it is not until toward the small hours when she hears his footsteps. He comes in with great dignity, as if he was accustomed to such calls. She, in her great anxiety, can not refrain from going over to him and whispering in his ear. He blurts it out saying, "Why, it was a boy." After the neighbors leave, with pencil and paper they count up that this fee will pay all expenses for a whole week.

I beg you to look upon another picture. Forty years have elapsed since the first. John has grown gray in his well doing, and is sitting quietly by his fireside thinking over the days that are past. The good old wife, whom God has spared to him these many years, sits crooning in the corner. A merciful Providence has helped them to provide against misfortune, and they no longer count the income of a day, but seek to place the yearly accumulation where it will do the most good in "sweet charity's name." The winter's storm is raging and the rain and hail is beating against the window pain, and the wind is sighing in the trees. A knock is heard at the door, and after a hurried talk the old doctor bids his good wife adieu and rides off into the storm. After many hours he returns, soaked by the pelting rain, and bearing under his great coat a bundle. The good wife after weary watching welcomes him, and detects a faint cry which emanates from the bundle. She asks no questions, and this aged man, who has been storm-beaten not only by the wind and rain, but by the cruel verdict of the

world so many, many times, takes the bundle and handing it to his wife says, "The little waif must have a home and the poor girl's character must be protected." That all-wise Providence which protects the sparrow in its fall, protects also this little waif through the kind administration of the doctor and his wife. Is it any wonder then that I say that because of their surroundings the wives of doctors are better than other wives?

Again, I suppose, to each and every one of you with the question: "If you had taken your wife's opinion as your estimate of men, would you not be better off to-day?" There is an intuition that women possess, for the defining and reading of human nature, that we men know nothing of. How often has that wife of yours said to you: "There is something about that man I do not like." You may have passed the remark with a jest, but an after experience has shown you how truthfully she prophesied. So, after all, I am inclined to believe that whatever good there is in us, whether reputation we have made, or however great achievements, it is all due to our wives. Recognizing their eternal goodness, we go about persevering in well-doing, trusting, hoping and believing, that because of their great solicitude in us that we will be enabled to pull up into heaven by our dear wife's "apron strings." And may it not be, that should the call come to us suddenly, whilst we are busy administering to the sick, comforting the distressed, providing for the widow and the orphan, and helping to bury the dead, that the good Father will forget to charge our sins of omission, but will allow us to pass in beyond the pearly gates? So here's to our wives, may they be to us in the future, just what they have been to us in the past.

THE COUNTRY DOCTOR.

The confidence, gratitude and love of his fellow-man;
Professional admiration and respect;
A comfortable competence and a peaceful old age,
Are his well-earned deserts.

*Responded to by Dr. John Moffett, Ex-President
Union District Medical Society, Rushville.*

After the little pleasantry of introduction, the main thought was what the country doctor could do, meaning, of course, the *doctor* born of a *mother* to give him brain-energy, will, perseverance, and purpose. And after excusing myself in the presence of the distinguished representatives from distant cities and other States and this, tendering the sentiments of welcome for their presence, and words of good cheer in behalf of the Shelby County Medical Society and myself—proceed to the statement that country doctors thus constructed, were from necessity—self-reliant. Often conditions and circumstances arise in the wonderful variety in a general practice that no time is allowed for obtaining aid in counsel or execution; the exigency is such that whatever ought to be done must be performed now. Watch the country physician, called upon to prescribe ten to thirty times a day for nearly as many diseases, including obstetrics and surgery fractures, dislocations, etc., all in the whirl of one twenty-four hours, which on one naturally feeling the burden of this position carrying in his heart of hearts that morality planted there by his sainted mother, calls aloud for the improvement of those fine talents confided to his care for addition in multiplying them by two.

Thus he struggles on in thorough and critical study. The consummation is that he can do more things well than any other physician. All the result of the moulding circumstances that environ the medical representative of the country from the day he sets out in professional life until he is gathered to his fathers.

ARMAMENTARIUM MEDICORUM.

How often has it been shown,
A workman by his tools is known,
And no amount of human skill
The void of lacking tools can fill.

Response by Hon. W. H. Armstrong, Indianapolis.

MR. SYMPOSIARCH: A noted humorist and litterateur, whose life had been spent in the city, and who had not seen a farmer except from the window of a railway car, was solicited to write a series of articles for an agricultural paper or magazine, and in accepting, said that he did so, because he had always observed that people were most interested on subjects they knew least about. As I am supposed to be somewhat familiar with the subject to which I am called to respond, the subject of tools, and as many of you have personal knowledge that on this subject I am always interested, but not always interesting, I recall this observation of the humorist in self-defense. Please accept it as an explanation of all failure on my part to mark up to the occasion to-day. But it seems to me that I heard many years ago, when a boy on the farm, a homely adage, often repeated among the neighbors, "that all signs fail in dry weather," and certainly the claim under which I have taken refuge, has no proper application to those who have preceded me in this pleasant affair. The reputation of the distinguished respondents is a sufficient evidence that they were selected by your committee with special reference to the sentiments to which they have responded and surely the "feast of reason," to which we have been so pleasantly welcomed, has been seasoned to a nicety by every artist who has presented a dish to tempt our palates. But we need not express our surprise, for who should know all about "the Clergy" and "the American Doctor" if not the Rt. Reverend Bishop, of the Central Diocese, and the able representative of a National Medical Society, which is composed of a larger number and better class of doctors, than any other similar organization in the world? It is also eminently proper that we should learn of the "Future of Medicine" from the head of the profession in that future great city of the west, and what is there worth knowing in medical literature, that the editor of that organ of PROGRESS, from which such knowl-

edge is sounded all over the South-west, could not tell us?

We should expect to be interested on the subject of Western Medicine from one chosen to preside over one of the largest sub-organizations in this country, and who takes his view of the field from such an advantageous position as the city to which all roads lead. And surely a prominent representative of that position into whose hands the diplomacy and management of the affairs of this country abroad seem about to be entrusted cannot fail to interest us on the subject of The Press! Such well endowed representatives of such historical and naturally interesting subjects as the doctors of that State that lies "just across the broad river," and of that lovely part of creation that we have been permitted to call our wives—who "know how it is themselves," cause us to give attention and yield our judgment at the same moment. In fact, 'tis only when we reach the case of the distinguished gentleman who construes the law for this grand old Hoosier Commonwealth that we can make an exception to the judgment of the committee. What practical knowledge such a well conditioned and vigorous specimen of Western manhood can have on the subject assigned "The Family Physician," is a question in my mind. Had it been of law or politics, or how to sign the application of a score of fellows for some office, and make each think he is the lucky one, all doubts would be dispelled at mention of his name. But you remember about the fellow who wrote an autobiography, in reply to a compliment about some unexpected information given therein, said that he couldn't help it because information flowed from him "just as naturally as Otter of Roses flowed from the Otter." This accounts for it: Our friend illumines any subject he touches.

Now all these things are very admirable and very interesting as sentiments, but for practical application I must admit that the idea in the sentiment of the "Successful Physician" came nearest my heart, viz:

"If thou desirest worldly pelf,
Oh! physician, heal thyself!"

I submit that a reasonable rendering of what this practical poet meant, would be:

"Oh! physician, tool thyself!"

For this is surely one of the first requisites to success. Without having done this, without being thus equipped, what use for the railway surgeon to go in response to the breathless summon of "Doc, you're wanted quick—biler busted; Jones' head blown off, and you'll have to amputate his legs?" Or of what use in the many other important exigencies of life would any man be? All the heroic results in the world's history have been achieved through the ability added to mankind by tools, or instruments, and the saving of life and pain accomplished by them when wielded by the hand of the skilled workman cannot be over-estimated. "Wounds by wider wounds are healed"—man might as well attempt to hoe corn without a hoe, as to be a doctor without instruments. 'Twas probably one of this kind about whom the rhymster wrote:

"For men are brought to worse distresses,
By taking physic than diseases;
And therefore commonly recover,
As soon as doctors give them over."

But let me not pursue this subject further. You have already allowed me to have my say longer than you usually do when I am on this subject, for which I thank you.

LACHRYMAL DISEASES.	The treatment of lachrymal diseases has in many ways proved disappointing to the surgeon and unsatisfactory to the patient. With Sir Wm. Bowman's probes, and Anel's syringe much good has, no doubt been done, but even the improved methods of Mr. Hulke, Weber and Stilling have failed to clear up the difficulties in chronic cases of docryo-cystitis unaccompanied by stricture. The whole subject must be studied from a pathological standpoint before much advancement upon old methods can be secured.
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AMERICAN
MEDICAL
ASSOCIATION.

Fortieth Annual Meeting
to be held in Newport,
R. I., June 25, 26, 27 and
28, 1889.

The Fortieth Annual Session will be held in Newport, R. I., on Tuesday, Wednesday, Thursday and Friday, June 25, 26, 27 and 28, commencing

on Tuesday, at 11 A. M.

"The delegates shall receive their appointment from permanently organized State Medical Societies, and such County and District Medical Societies *as are recognized by representation in their respective State Societies*, and from the Medical Department of the Army and Navy, and the Marine-Hospital Service of the United States.

"Each State, County and District Medical Society entitled to representation shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number. *Provided*, however, that the number of delegates for any particular States, territory, county, city or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

Members by Application.—Members by Application shall consist of such members of the State, County and District Medical Societies entitled to representation in this Association, as shall make application in writing to the Treasurer, and accompany said application with a certificate of good standing, signed by the President and Secretary of the Society of which they are members, and the amount of the annual membership fee, five dollars. They shall have their names upon the roll, and have all the rights and privileges accorded to *permanent members*, and shall retain their membership upon the same terms.

The following resolution was adopted at the last session: That in future, each delegate or permanent member shall, when he registers, also record the name of the

Section, if any, that he will attend, and in which he will cast his vote for Section officers.

Secretaries of Medical Societies, as above designated, are earnestly requested to forward, *at once*, lists of their delegates.

Also, that the Permanent Secretary may be enabled to erase from the rolls the names of those who have forfeited their membership, the Secretaries *are, by special resolution*; requested to send to him, annually, a corrected list of the membership of their respective Societies.

SECTIONS.

"The Chairman of each Section shall prepare an address on the recent advancements in the branches belonging to his Section, including such suggestions in regard to improvements in methods of work, and present, on the first day of its annual meeting, the same to the Section over which he presides. The reading of such address not to occupy over forty minutes."

By-Laws.

Practice of Medicine, Materia Medica and Physiology.—Dr F. C. Shattck, Chairman, Boston, Mass.; Dr. G. A. Fackler, Sec'y,—Cincinnati, O.

Obstetrics and Diseases of Women.—Dr W. H. Wathen, Chairman, Louisville, Ky.; Dr. A. B. Carpenter, Sec'y, Cleveland, O.

Surgery and Anatomy.—Dr. N. P. Dandridge, Chairman, Cincinnati, O.; Dr. W. O. Roberts, Secretary, Louisville, Ky.

State Medicine.—Dr. J. Berrien Lindsly, Chairman, Nashville, Tenn.; Dr. S. T. Armstrong, Sec'y, U. S. M. Hosp. Service.

Ophthalmology.—Dr. George E. Frothingham, Chairman, Ann Arbor, Mich.; Dr. G. C. Savage, Sec'y, Nashville, Tenn.

Laryngology and Otology.—Dr. W. H. Daly, Chairman, Pittsburg, Pa.; Dr. E. Fletcher, Ingals, Sec'y, Chicago, Ill.

Diseases of Children.—Dr. J. A. Larrabee, Chairman, Louisville, Ky.; Dr. C. J. Jennings Sec'y, Detroit, Mich.

Oral and Dental Surgery.—Dr. F. H. Reh-

winkle, Chairman, Chillicothe, O.; Dr. E. S. Talbot Sec'y Chicago, Ill.

Medical Jurisprudence.—Dr. James G. Kiernan, Chairman, Dunning, Ill.; Dr. T. B. Evans. Sec'y, Baltimore, Md.

Dermatology and Syphilography.—Dr. L. D. Bulkley, Chairman, New York; Dr. W. T. Corlett, Sec'y, Cleveland, O.

A member desiring to read a paper before a Section should forward the paper, or its *title and length* (not to exceed twenty minutes in reading), to the Chairman of the appropriate Section at least one month before the meeting.—*By-Laws*.

PROGRAMME.

*First Day, Tuesday,
June, 25.*

Assemble in Music Hall, Bellevue Avenue, at 11 A.M.

Meeting called to order by Dr. Horatio R. Storer, Chairman Committee of Arrangements.

Prayer. Rev. Thatcher Thayer, D.D. (Cong.), the senior clergyman of Newport.

Reading names of delegates and others thus far registered, by Permanent Secretary, Dr. Wm. B. Atkinson, of Philadelphia.

Announcement of the programme for the day, of halls for the Sections, that papers not already listed be handed to Chairman of Committee of Arrangements for reference to appropriate Sections, that Judicial Council meet at 2 P.M. at Newport Casino, and that, to prevent the usual haste and confusion, the delegates from the different States hold their separate meetings, to elect members of the Nominating Committee, at 9:30 A.M. Wednesday, at the Music Hall, half an hour before the general session.

Addresses of Welcome by Hon. Thomas Coggeshall, Mayor of Newport; by Dr. Henry E. Turner, of Newport; President of State Board of Health, on behalf of the profession of Newport; and Hon. James H. Eldridge, M. D. of East Greenwich, ex-President of Rhode Island Medical Society, on behalf of the profession of Rhode Island.

Presidential Address, Dr. W. W. Dawson, of Cincinnati, Professor of Surgery in the Medical College of Ohio.

Second Day, Wednesday, June, 26.

Meeting called to order by the President of the Association, at 10 A.M.

Prayer.

Reading continuation of registry list, of programmes for the day, and call for reports as to elections upon Nominating Committee.

Address on Medicine, by Dr. Wm. Pepper, of Philadelphia, Provost of the University of Pennsylvania.

Report of the Trustees of THE JOURNAL.

Consideration of proposed Amendments to the Constitution.

Announcement of Nominating Committee, and that it will report at close of Thursday's general session.

Third Day, Thursday, June, 27.

Meeting called to order by the President, at 10 A.M.

Prayer.

Reading of continuation of registry list, and of programmes for the day, and notice that all new business must be introduced at to-day's session.

Address on Surgery, by Dr. Phineas S. Conner, of Cincinnati.

Introduction of New Business.

Report of Treasurer

Report of Librarian

Report of Rush Monument Committee.

Report of Nominating Committee.

Fourth Day, Friday, June, 28.

Meeting called to order by the President, at 9 A.M.

Prayer.

Reading of continuation of registry list, and of programmes for the day.

Address on State Medicine, by Dr. W. H. Welsh, of Baltimore.

Report of Necrologist.

Reading names of newly elected officers of the Sections and Delegates to Foreign Societies.

- Introduction of the in-coming to the re-
tiring President.
- Response by the former.
- Final Adjournment.

*Special Attention is called to the following
Rules of the Association :*

It shall be the duty of every member of the Association who proposes to present a paper or report to any one of the Sections, to forward either the paper, or a *title* indicative of its contents, and its *length*, to the Chairman of the Committee of Arsangements at least one month before the annual meeting at which the paper or report is to be read. It shall also be the duty of the Chairman and Secretary of each Section to communicate the same information to the Chairman of the Committee of Arrangements concerning such papers and reports as may come into their possession or knowledge for their respective Sections, the same length of time before the annual meeting. And the Committee of Arrangements shall determine the order of reading or presentation of all such papers, and announce the same in the form of a programme for the use of all members attending the annual meeting. Such programme shall also contain the rules specified in the By-laws and Ordinances concerning the consideration and disposal of all papers in the Sections.

No report or other paper shall be entitled to publication in the volume for the year in which it shall be presented to the Association, unless it be placed in the hands of the Committee of Publication on or before the first day of July. It must also be so prepared as to require no material alteration or addition at the hands of its author.

Every paper or address received by this Association, or by a Section, and ordered to be published, and all reports of Committees, and all plates or other means of illustration, shall be considered the exclusive property of the Association, and shall be publisseed and sold for the exclusive benefit of the Association.

ORDINANCES.	<i>Resolved</i> , That the several Sections of this Association be requested, in the future, to refer no papers or reports to the Committee of Publication, except such as can be fairly classed under one of the three following heads namely: 1. Such as may contain and establish <i>positively</i> new facts, modes of practice, or principles of real value. 2. Such as may contain the results of well- devised originel experimental researches. 3. Such as present so complete a review of the facts on any particular subject as to enable the writer to deduce therefrom legitimate conclusions of importance.
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Resolved, That the several Sections be requested, in the future, to refer all such papers as may be presented to them for examination by this Association, that contain matter of more or less value, and yet cannot be fairly ranked under either of the heads mentioned in the foregoing resolution, back to their authors with the recommendation that they be publised in such regular medical periodicals as said authors may select, with the privilege of placing at the head of such papers, "Read to the Section of the American Medical Association, on the day of 18 . ." . .
(Vide *Transactions*, vol. xvi, p. 40.)

Resolved, That no report or other paper shall be presented to this Association unless it be so prepared that it can be put at once into the hands of the Permanent Secretary to be transmitted to the Committee of Publication. (Vide *Transactions*, vol xvii, p. 27.)

CRITICISMS BY MATHEWS.	Professor Joseph M. Mathews will de- light the readers of PROGRESS with a regular mensual series of criticisms on the current literature of Rectal Surgery.
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He wields a free lance, and many secrets of the rectal tube shall be disclosed to the chagrin of the pile doctor.

FRENCH

SURGERY.

Pean, and his Forceps.

BY

L. S. MC'MURTRY,

A. M., M. D.,

DANVILLE, KY.

Paris, March 30, 1889.

the hands of M. Pean. The obstetrical clinics of Tarnier are held three days in the week at the Maternity Hospital in Le Rue des Chartreux, and are of easy access to visitors.

The day after arriving in Paris, I called at M. Pean's elegant home, at 24 Boulevard Malesherbes. Handing my card to his liveried servant, I was shown in "the salon," where a number of ladies were awaiting their turn to see the eminent surgeon. In a short time I was invited within to see M. Pean in his consulting room. He is a man of splendid presence and fine proportions. His age I would take to be fifty, and his weight two hundred. Like our venerable and noble confrere in Chicago, M. Pean wears at all times the conventional dress suit of black cloth with "swallow-tail coat." His knowledge of the English language is imperfect, and my knowledge of the French is likewise; but with a limited vocabulary acquired during my student days in New Orleans, I made known to him that I was an American surgeon, desiring to see some work at his hands. With a cordiality which I can never forget, he gave me a seat at his side and a card admitting me to all his operations "*toujours*."

This morning I was invited to meet him at an early hour at a small hospital in the *Rue de la Santé*. Every Saturday morning he has a clinique at the Hopital St. Louis, where he frequently does two or three capital operations during the hour. To-day he did an operation which I especially desired to see him perform. It was the operation of total vaginal extirpation of the uterus for

After spending a month in England and two weeks in Edinburgh, I came to Paris. The principal purpose of my visit here was to attend the obstetrical clinics of M. Tarnier, and to see some pelvic surgery at

cancer, (vaginal hysterectomy). When we entered the room all was prepared for the operation. Four assistants were in waiting, with the table, instruments, etc., in readiness.

What impressed me as quite unusual, was the age of his assistants, all being men of years and experience, one assistant being evidently older than the operator. Of the instruments prepared for the operation, placed in a solution of carbolic acid, 1 to 40, were at least an hundred hæmostatic forceps, known throughout the surgical world as "Pean's forceps." They were of all sizes and exquisite workmanship. Removing his coat and hat, he put on a silk vest lined with fur, and over this his apron. While the patient was being anesthetized, his hands were carefully cleansed and sterilized with a carbolic solution. Chloroform is in general use in Paris; indeed I have seen no other anesthetic used. M. Pean gave the personal attention to washing the vagina with an antiseptic solution, with the aid of the speculum, and the shaved the hair from the labia and perineum. Having placed the patient on her left side, and giving to his assistants four retractors placed in the vagina, he asked me to sit beside him and take charge of the sponges. I noted especially the manner in which these were prepared. The sponges were of small size, and the Sister had fastened them to the ends of small elm sticks. They were surgically clean and carbolized. Seizing the cervix uteri, which was for the most part destroyed by cancerous infiltration and ulceration, M. Pean drew the organ low down and holding it firmly with the vulsellum, proceeded to divide the cervico-vaginal junction. This step of the operation was done with knife and scissors.

Then seizing the broad ligaments with forceps, they were divided, and the fundus turned out into the vagina. As the operator proceeded, hæmostatic forceps were placed around before dividing the membranes, until these instruments were hanging in a

cluster from the vagina. The greatest difficulty was encountered in separating the diseased cervix from its posterior attachments, extensive infiltration having occurred toward the rectum. This was done most thoroughly, placing the forceps in soft healthy tissue and dividing and removing the tissues therefrom. As soon as the fundus was turned into the vagina, the uterus being bloodless was cut off at the junction of the fundus and cervix, so as to give space for easy manipulation.

When extirpation was completed, at least fifteen or eighteen forceps of various sizes were hanging from the vagina. Carefully cleansing of clots and blood, and an iodoform tampon completed the operation. A soft catheter was placed in the bladder, and the patient put to bed with forceps and catheter *in situ*.

Throughout the operation the operator was "fussing" with his assistants. As my French vocabulary does not embrace "cuss words," I could not comprehend more than the voice and inflection implied. The assistants were evidently accustomed to it, as not a word was spoken during the operation except by the operator. All seemed in pleasant mood, and nothing this side of heaven could have been more serene and placid than the face of the Sister, who cleansed the sponges and placed them in my hands.

M. Pean is a man of great ability and wonderful manipulative skill. He has a high appreciation of the dignity of our profession, its duties and responsibilities. I trust he may long be spared to pursue the brilliant career he has attained in the cause of science and humanity.

Having completed my mission to Paris, I go to-morrow to Strassburg, to see the work of Kœberlé and Freund; thence I go to Munich to study the methods of Winckel at his great clinic. I will most probably write you next from the latter place.

KENTUCKY STATE MEDICAL SOCIETY.

(INCORPORATED 1851.)

President,
L. S. McMURTRY, M. D.,
DANVILLE.

Chairman Committee of Arrangements,
J. M. FOSTER, M. D.,
RICHMOND.

Permanent Secretary,
STEELE BAILEY, M. D.,
STANFORD.

Annual meeting, Richmond
May 8, 9, and 10, 1889.

The thirty-fourth annual meeting of the Kentucky State Medical Society will be held in Richmond, Wednesday, Thursday and Friday, May 8, 9, and 10, 1889.

The arrangements will be carried out in a manner that will reflect credit upon the Committee having it in charge. The citizens of Richmond and vicinity are very much

interested in the entertainment of the society. They say: "You are our guests, to our guests we not only open our doors, but our hearts as well, to give you a cheery welcome."

We have no doubt that the gathering will be large and every portion of the State will be well represented. Though strong in number, and still stronger in the intelligence of her members, we would gladly welcome to our ranks every regular and honorable physician in the State.

Every one will be satisfied with the character and scope of the programme. The papers are numerous and all are productions scientific, and will prove entertaining and instructive.

Railroad certificates for reduced fare, will be furnished to every member who desires them on application to the Secretary.

The officers of the Society earnestly entreat the coöperation of all members to the end that the meeting at Richmond may prove the largest, most enjoyable, spiritfui and successful in the history of the Society.

STEELE BAILEY,

Permanent Secretary.

PROGRESS

A MEDICAL MAGAZINE ISSUED MONTHLY.

DUDLEY S. REYNOLDS, A. M., M. D., EDITOR.

JOSEPH M. MATHEWS, M. D., ASSOCIATE EDITOR.

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VOL. III. LOUISVILLE APRIL 1889. No. 10.

<p>ASSOCIATE EDITOR.</p>	<p>Professor Joseph M. Mathews, for a long time associated with the editor of PROGRESS in journalism returns again to the Guild. Henceforth he will be associate editor of PROGRESS.</p>
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<p>THE MEDICAL PRACTICE ACT.</p>	<p>Every physician in Kentucky is interested in the enforcement of the law regulating the practice of medicine in this commonwealth. Unfortunately, the language of the statute has been construed differently in different portions of the state; it is clear, however, in its phraseology, and according to the best legal authority, may be easily enforced. That portion which requires diplomas, issued by institutions outside of the state of Kentucky, to pass the scrutiny and receive the endorsement of the faculty of either one of the regularly chartered medical colleges in the state, the Secretary of the State Board of Health, or the State Medical Society, has been taken advantage of by a few shrewd unqualified persons not entitled to practice, under the provisions of the act. Four or five of these people met, organized what they</p>
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called the Dosimetric Society of Kentucky, issued certificates to each other and registered them with the Jefferson County Clerk. This of course, will not stand the test of legal investigation, and no alarm need be felt by the friends of justice, law and order. The medical profession of Louisville held a meeting and appointed a committee to assist the Commonwealth's Attorney in the prosecution of such cases, both by the employment of associate counsel and in the collection of evidence against guilty parties. So far, no indictments have been reported, yet a number of indictable people are known to the committee. Nearly all the members of the regular medical profession have complied with the law; the homeopathic profession has been equally observant; the non-descripts, though not very numerous, should be brought to a sense of respect for the law, and this may be done by its rigid enforcement only.

HOSPITAL COLLEGE DAMAGED BY FIRE.

On the morning of April 25, at 5 o'clock flames were discovered issuing from the Hospital College of Medicine. Before they could be subdued the main portion of the new lecture hall and the museum were destroyed. The University of Louisville offered their building, and the Mayor and Charity Commissioners tendered the amphitheatre of the City Hospital. The latter was accepted as being most convenient though less comfortable.

There are above 160 students in attendance. The clinical rooms and laboratories suffered but little so that a part of the instruction only will have to be given at the hospital. It is expected the work of repair may be done by the 15th of May, so that the last month of the present session may be spent in the College building.

PUBLISHERS' DEPARTMENT.

ROGERS-TULEY COMPANY, Publishers

Address all matter relating to this department to the
Publishers, 235 and 237 Third Avenue.

The Publishers' Department of PROGRESS is designed to afford the Business Editor proper space, in the regular order of our system of classification of the text, for such notices and comments as he may feel inclined to make of meritorious articles, and such items of news as may seem to him best calculated to interest the readers.

No house will, therefore, be able to purchase space in this department.

CAMPHO-PHENIQUE.

Extract from a letter received from
ROMAIN J. CURTISS, M. D.,

Professor of General Pathology, Hygiene and Bacteriology, College of Physicians and Surgeons, Chicago, Ill., and Surgeon in charge of St. Joseph's Hospital, Joliet, Ill.

I have used Campho-Phenique on burns and wounds, with great satisfaction. It will heal wounds without pus. It is certainly a good disinfectant—what I call a good germitoxic. It

will destroy, positively, the streptococci of pus, as I know by experiment, and I am now treating with it two cases of osteomyelitis acuta (bones of the hand), which are doing well.

WINE OF COCA.

It has been pretty well settled by experience, that a wine of coca, rich in resinous matter, possesses valuable stimulating properties in cases of loss of sleep, severe mental strain, and general nervous prostration. Those wines containing a large percentage of cocaine and a small percentage of resinous matter have rather an irritant or excitant effect upon the cerebral centres, and sometimes dangerously depressing effects upon the motor centres. It may fairly be concluded, therefore, that those wines of coca made from the dried leaves have but little value, yet, when cocaine is added, they become dangerous. Of course, the character of

the wine employed should be considered; the stronger wines as Sherry, Port, and Malaga represent the better class; and, whatever may be said of the attempts to establish a standard strength for Wine of Coca, no substantial improvements have yet been made upon the Vin Mariani

PEACOCK'S
BROMIDES.

NERVOUS HEAD-
ACHE.—With the con-

stantly increasing nervous disorders of my practice, I find Peacock's Bromides does more to relieve such patients and lessen the cares and anxieties of the physician, than anything I have ever tried. I had a female patient lately who had to go to bed for four or five days, at each menstrual period, on account of nervous headache. One bottle cured her, and the three last periods have been easy and no headache. I use it in all classes of nervous troubles with great benefit.—Geo. H. F. House, M. D., Clayton, Ind.

VOMITING IN PREGNANCY.—I am using Peacock's Bromides in my practice, daily; and am better pleased with the preparation than ever. I have discovered a new application for it, in a case of vomiting in pregnancy. Believing that the sickness was produced by nervous irritability, I have and am giving Peacock's Bromides in full doses, with fine effect. I have prescribed it several times lately in convulsions of children with very satisfactory results.—John A. Campbell, M. D., Franklin, Tenn.

HYSTERIA.—I have used Peacock's Bromides with fine results, and shall continue to use it. One case in particular illustrated its effects. The patient (female) was much troubled with hysteria, and, as usual in such cases, had every imaginable disease. I gave her Peacock's Bromides, and, on taking as directed, all hysterical phenomena disappeared. In such cases I consider it the remedy par excellence.—E. F. Conyng-hame, M. D., Olivia, Minn.

PROGRESS

A Monthly Magazine for Students and Practitioners of Medicine.

"I HOLD EVERY MAN A DEBTOR TO HIS PROFESSION; FROM THE WHICH AS MEN OF COURSE DO SEEK TO RECEIVE COUN-
TENANCE AND PROFIT, SO OUGHT THEY OF DUTY TO ENDEAVOUR THEMSELVES, BY WAY OF AMENDS, TO BE A HELP AND
ORNAMENT THEREUNTO. THIS IS PERFORMED, IN SOME DEGREE, BY THE HONEST AND LIBERAL PRACTICE OF A PROFES-
SION; WHEN MEN SHALL CARRY A RESPECT NOT TO DESCEND INTO ANY COURSE THAT IS CORRUPT AND UNWORTHY THEREOF,
AND PRESERVE THEMSELVES FREE FROM THE ABUSES WHEREWITH THE SAME PROFESSION IS NOTED TO BE INFECTED; BUT
MUCH MORE IS THIS PERFORMED, IF A MAN BE ABLE TO VISIT AND STRENGTHEN THE ROOTS AND FOUNDATION OF THE
SCIENCE ITSELF; THEREBY NOT ONLY GRACING IT IN REPUTATION AND DIGNITY, BUT ALSO AMPLIFYING IT IN PROFESSION
AND SUBSTANCE."—BACON.

VOL. III.

LOUISVILLE, KY., MAY, 1889.

No. II.

GENERAL MEDICINE.

PROGRESS IN PRACTICAL MEDICINE.

BY

J. W. GILBERT,

M. D.,

LAWRENCEBURG.

Read to the Kentucky State
Medical Society at Rich-
mond, May 8, 1889.

Since Dr. Richard Bright's report of twenty-three cases of albuminuria associated with general dropsy, etc., in 1827, it has been customary among nosologists to call all those affections of the kidney com-

prehended in his report, by his name, and consequently Bright's disease has become one of the most familiar names in medicine. Also, it has been the rule among pathologists to interpret the different morbid anatomical appearances found in different cases by attributing them to different stages in the process of the disease with the notion that the last stage is a result of the contraction of the products of inflammation. But, since the day of Bright, some have denied the correctness of this view of the disease. Dr. George Johnson, as early as July, 1859, claimed that the genuine contracted kidney had never passed through a previous stage of inflammation. (Lancet, July, 1859). He believed that the apparent increase of the amount of interstitial connective tissue was only in a relative sense in consequence of the destruction of the glomeruli and epithelium of the convoluted tubes. Neither the clinical history of kidney contraction nor its syptomatology justifies the idea of pre-

viously existing inflammation. It is very exceptional, in fact, to find in a case of kidney cirrhosis a history of previous inflammation.

It is not shown to follow scarlatinal albuminuria sufficiently often to indicate a causal relation between the diseases. There has scarcely ever been found any general dropsy associated with abundant albuminuria, with tube casts, etc.; but, on the contrary, the contracted kidney has usually come on so insidiously that the patient and his friends alike have been unaware of any serious trouble until, as frequently happens, the case is ushered in by an apoplectic and epileptic seizure, or more likely, perhaps, uremic coma. He may have even believed himself in perfect health until a few minutes before he is *in articulo mortis*. If the patient is intelligent and apprehensive, he may have noticed some increased nocturnal micturition, the secretion being of a paler color, containing *less solids*. This symptom is only complained of because it disturbs sleep. While such sudden manifestation of the disease is by no means always the case, it is not at all uncommon, and even in those cases in which the patient is painfully aware of the gravity of his condition, which progresses with quite noticeable symptoms, gradual loss of strength, heart palpitations, etc., he does not show any general dropsy, as a rule no fever, in fact no symptoms of renal inflammation. In a typical case of parenchymatous nephritis, whether acute or chronic, the *ensemble* of

symptoms is very characteristic. *The amount of urine per diem is always diminished, and the organic constituents are always increased.*

"As long as the chronic inflammation of the kidneys continues to advance or remain at its height, the quantity of urine excreted daily is far below the normal." (Ziem. Cyc., vol. xvi, p. 353.)

The albumen is never absent in the inflammatory disease; as a rule, other things being equal, the amount is in direct ratio to the activity of the inflammation. The same is true of urea and other normal constituents of the urine. In the contracted kidney the reverse of this is true, the watery portion is increased and solids diminished in quantity. The cause of this renal degeneration is veiled in some obscurity; and, on account of its great similarity to cirrhosis of the liver, it has been assumed to be produced by the use of alcohol, without sufficient reason, however.

Bartel says, "Independently of avocation I am acquainted with no particular circumstances or habits of life which can be confidently designated as being the cause of this disease; above all I must enter my protest against the view which is widespread in England, although Dickinson certainly disputes its correctness, that the abuse of spirituous liquors favors the development of the genuine contracting kidney. In the first place, among all the patients whom I have treated, three only were brandy-drinkers to any notorious excess, while the greater number by far who were affected with this complaint had lived remarkably abstemious lives. In the second place, throughout my twenty-five years of active service as a hospital physician, I have had the most abundant opportunity of watching the consequences of intemperance both at the bedside and upon the *post-mortem* table; yet these three cases have hitherto been the only ones in which I have found atrophied kidneys in the bodies of habitual drunkards." (Ziem. Cyc., vol. xv, p. 412.) The causation is attributed

now, by a great number of recent writers, to some faulty metabolism of nitrogenous substances in the liver; and that idea does not oppose the opinion of Bartel. For this faulty metabolism is not a condition that belongs to any special class of persons or to any particular vocations; as Fothergill, in his peculiarly attractive and quaint way has said, "Excess of uric acid does not necessarily depend upon very high living. This idea must be dispelled. At the same time it can be and very often is so originated. At other times it takes its origin in imperfect oxidation of the nitrogenized matter, which results from the splitting up of peptones in the liver into glycogen and waste azotized matter. Very commonly it is the consequence of impaired functional activity in the kidneys. . . . Consequently lithiasis may show itself in a working woman as well as in a wealthy squire." (Fothergill's Hand-book, p. 276.) What particular substance is the specific agent in this morbid action is not stated, and the manner of its action is explained on various hypotheses. We will assume that it is a substance, the result of faulty metabolism or imperfect assimilation of nitrogenous food; whether it is uric acid, leucin, tyrosin, or whether all of these substances combined, is immaterial for our purpose at present. Many authors have found it associated with such conditions. Some have explained it to be a general affection of the arterioles and capillaries due to a constant irritant effect kept up by some morbid agent circulating in the blood. Notably among those holding this view are Gull and Sutton; others, and among them Mahomed, hold that the systemic agent acts through the nervous system, and, either by its local effect on the ganglia in the kidney or on or through the central nervous system, keeps up a constant spasm of the arterioles. This spasm increases the cardiac resistance and causes the cardiac hypertrophy, which in turn increases the spasm; but if we are allowed to assume from such experiments as

Claude Bernard's on the parotid gland, which showed that stimulation of the sympathetic diminished the blood supply to the glands as well also as the watery secretion and size of it, but increase the organic constituents to a maximal limit, it would appear that the contrary would happen to that which actually does occur in renal contraction, if Mahomed's view is correct. Just the opposite obtains in the disease under consideration, the watery elements are increased, the organic diminished. This accords with the Bernardian experiment when he applied the induction current to the secretory nerve of the parotid gland. The blood supply was increased to the gland, as shown by incision of its substance; it would bleed more freely, the secretion was lighter and contained less organic matter. By experiments on other glands of the body besides the parotid it has been tolerably well established that the glandular activity is controlled, other things being equal, by the nervous supply to the gland, and that a stimulation of the nerve supplying it from the sympathetic system increases the solids characteristic of that peculiar secretion. In other words, one is a vaso-dilator the other a vaso-constrictor, one a secretory the other a trophic nerve. "The precise influence which special nerves exert upon the secretion of urine has not yet been positively ascertained. Some important facts, however, bearing upon this subject have been developed of late years. In his interesting and novel experiments upon artificial diabetes in animals, Bernard found that when irritation was applied to the floor of the fourth ventricle in the median line, exactly in the middle of the space comprised between the origin of the pneumogastrics and the auditory nerves, the urine was increased in quantity and became strongly saccharine. When the irritation was applied a little above this point, the urine was simply increased in quantity, but it contained no sugar." (Flint's Text-book of Human Physiology, p. 405.)

If we are justified in applying the results of such experiments to the kidney, and it is quite reasonable to assume that we are, it would seem more rational to explain the facts actually observed in kidney contraction by assuming that the morbid agent acted through the central nervous system and on the secretory instead of the trophic nerve. In the first place, the watery elements could not be increased at the expense of the solids unless the secretory nerve or vaso-dilator was affected, thereby giving the gland a greater blood supply, greater pressure or greater rapidity of the current. But this greater blood pressure could not be explained upon the idea of cardiac hypertrophy. It would not account for the urinary secretions being greater at night, which is a well-known fact. Bartel says: "The fact is remarkable that the patients are invariably more tormented with the desire to pass water *by night than by day*. It appears that this greater frequency of the desire to micturate at night is founded upon the more abundant secretion that takes place at this time." (Ziem. Cyc., vol. xv, p. 432.) Nor has cardiac hypertrophy been shown always to precede the abundant nocturnal secretion. The *materies morbi*, during sleep and as a consequence of bodily quietude and of the inactivity of the skin, the bronchial and intestinal mucous membranes, and such organs as act vicariously to the kidneys, accumulate in the blood, thus stimulating more, the longer the body remains quiet, the central nervous organs and keeping up a greater blood supply to the glands. If this poison acted on the trophic ganglia, either in the kidney or centrally, and thus kept up a spasm of the arterioles, as maintained by Mahomed and others, the result would be an increase in solids in the urinary secretion until some maximal limit was reached and the gland became exhausted; also the specific gravity of the urine would be much greater, and would increase as bodily quiet was prolonged. The exact

converse of this actually occurs. If the excessive secretion is due to cardiac hypertrophy, without taking into consideration the secretory nerve action—if, in other words, the excessive secretion is to be explained on mere physical laws, without any vital action of the gland itself, then it would have to be explained by the laws of osmosis, diffusion, and transudation. Tigerstedt and Santesson found that “while filtration takes place readily through dead animal membranes, nevertheless, when living membranes were used, such, for instance, as the lung of a frog, and filtration was attempted under the same pressure with serum or normal salt solution, no filtration at all was obtained. If the living lung tissue, that allowed no liquid to filter through it, was killed by heat, or by any other means, filtration quickly commenced.” (R. H. B. of M. Sciences.

Similar results were reached with other structures. As we have seen that the abundant urinary secretion can not be satisfactorily accounted for upon mere physical laws, the laws of liquid diffusion, neither can the cardiac hypertrophy be satisfactorily accounted for by the resistance in the kidney. It is very palpably ridiculous to assume that the kidney is diseased in consequence of the hypertrophied left ventricle. Yet the attempt is made to explain the first and most prominent symptom of its morbid action, viz., the excessive urinary secretion as a result of the hypertrophy, and consequent excessive blood pressure. As we have said, cardiac hypertrophy has not always been shown to precede the morbid action in the kidney, neither has the kidney affection been shown to precede the cardiac hypertrophy. There is a constant pathological condition which obtains in kidney-cirrhosis, viz., endocarditis, endarteritis, and a thickening of the arterioles, one or all of which conditions are found more or less perhaps in every case. “The valves are frequently the seat of chronic endocarditis; the arteries throughout the body are often

thickened, and may be calcareous.” (J. W. Roosevelt, N. Y., R. H. B.) And the same author further says, “It is most probable that the lesions in the kidneys, and those commonly associated with them, are all due to some common cause. This common cause is found probably in arterial tension. It remains to be shown that high tension exists in all cases, and that it precedes the lesions. When this is done the cause of the high tensions must be sought for, and it may perhaps be found in some substance, the result of faulty metabolism circulating in the blood and producing the vascular spasm, either by direct irritation of the vessels, or by its effect on the vaso-motor nerves.

The substances referred to in the above quotation, resulting from azotized food, may most probably be leucin, tyrosin, or uric acid, which substances are now known to be products of faulty metabolism. (G. V. Poore, London Lancet, Dec. 1888.) Normal products of tissue waste may also be active in the production of this kidney disease, when such substances are in an abnormal quantity, but that is as yet *sub judice*. It is most likely, however, the result of some abnormal constituent of the urine, and instead of this substance stimulating the trophic nerves and causing spasm of the arterial system, it is more likely that the initial condition is vaso-dilation, for vascular tension would cause less blood supply to the kidney and greater specific gravity of the resulting secretion, for it would contain more solids and less water, and vaso-dilation would cause a greater blood supply and an increased amount of water, which is just the condition that obtains in this affection. This vaso-dilatation would naturally result in a tissue hyperplasia, a hyper-nutrition on the whole arterial system through the vasa-vasorum. It is a well-known pathological law, that a structure is susceptible to inflammation in direct ratio to its functional activity; and that all structures have a maximum limit at which nutrition must stop and at which time—ap-

proaching functional exhaustion—they are the most liable to disease. Under these universal laws we find a ready explanation of the conditions in the several stages of the contracted kidney. We have already seen that endocarditis, endarterities, etc., are found in renal degeneration; but I apprehend that they are never found as the initiatory condition. It would be improbable from the nature of the case; but hypernutrition and hyperplasia, and then inflammation, would be likely to be found in the order mentioned. It would be quite reasonable to expect that inflammation would result from the constant contact of the irritating *materies morbi* with such susceptible structures as the endocardium and vessels that are found to be under these circumstances. Through the influence of this vaso-dilatation the coronary artery would naturally give a greater blood supply to the heart, and its muscle would develop to its maximal limit, as well as the circular muscles of the arteries—and so we find it. Consonant with this idea of vaso-dilatation as regards the kidney itself, besides the excessive nocturnal micturition of a watery nature to which we have already adverted, the first morbid condition noticeable is a thickening of Bowman's capsule and a compression, from its contraction, of the glomeruli. "One very remarkable microscopical appearance is the great number of wasted glomeruli, which appear like dark round bodies, and in which the outline of the capillary coils is still plainly perceptible; they are often grouped together closely, and appear much smaller than the normal Malpighian tufts which still remain; they lie in the midst of the striped and fibrilated connective tissue, perfectly independent of the tubuli uriniferi. Round about these remnants of capillary tufts are recognized tissue bands which run concentrically round the glomeruli and unite in forming a close-fitting capsule around them." (Ziem. Cyc., p. 452). Now, if we sum up some of the well-known pathological conditions which exist in this affec-

tion, we can find a "vicious circle" which culminates in the death of the affected part. We have the thickened and powerful heart, the arteries, with their muscular structures developed from an abundant nutrition, and, as a consequence, in the arteries the walls are non-resisting to the force of the blood pressure, which in turn compels the heart to greater effort. In the kidney itself a resistance is developed *pari passu* with the morbid states in the arteries and heart; so that the one aids the development of the other.

It is now a well known clinical fact that the pulse is less compressible in this disease than normal—much less sphygmographic dirotism is shown in the tracings. This condition is not peculiar to the radial artery, but obtains in the whole arterial system. It is manifest, therefore, that the recoil of the arterial system, which is a powerful aid in propelling the blood current, is lessened; if to a great degree, so that the second pulse-wave is not perceived in a sphygmographic tracing, it increases the work of the heart enormously. This condition is of itself quite enough to account for the left ventricle hypertrophy, and, more than that, the two conditions are developed simultaneously, at least as far as is known. The usually accepted cause of the cardiac hypertrophy, the kidney contraction, is not enough. The renal artery is not large. If it were entirely obliterated, either gradually or suddenly, as by ligature, it would not nor could not of itself produce hypertrophy of the left ventricle. Other arterial areas, quite as large as the kidney, are obliterated without, so far as is known, instituting any hypertrophic enlargement of the heart. The question may be asked, Why no hypertrophy of the right ventricle, if the resistance in the kidney is not the cause? The answer which I offer is this: The right side of the heart is the venous side, and has always circulating in it venous blood. The veins are not affected in this disease; there is found no phlebitis, and the endocarditis is not found on the right side. The pulmonary artery is

found thickened, but there is no endarteritis in it. Why? The answer to this question, so far as I know, has not been made. But my belief is that the active agent in the production of this disease is derived from faulty metabolism of nitrogenous products in the liver; and that so long as these remain in an unoxygenated blood they are innocuous (existing, perhaps, in combination with carbonic acid in the form of a carbonate); but as soon as the carbonic acid is liberated by respiration they become active and are carried through the general blood current, and, coming in contact with the nerve centers, they produce vaso-dilatation; also, by their local action as an irritant on the heart and arteries, they cause in them a local inflammation and thickening of their walls; and finally, by their action on the kidneys, affect them in a similar way, being discharged from the body probably in the form of tyrosin, leucin, or uric acid.

The conclusion is, therefore, (1) That the contractive degeneration of the kidney is not an inflammatory disease, nor the result of inflammation. (2) That the morbid agent in its production is a result of faulty metabolism of azotized food. (3) That the substance resulting from faulty metabolism is not necessarily dependent on any particular habits or vocation. (4) That it is most likely one or all of the substances known as leucin, tyrosin, or uric acid, etc., resulting from faulty metabolism. (5) That its activity is first manifested on the central nervous system, producing vaso-dilatation, and ultimately and locally on the heart, arteries, capillaries, and kidney. (6) That it is only noxious in arterial blood. (7) That its innocuousness in venous blood is probably due to its combination with carbonic acid. (8) That the kidney itself is affected first only by its increased functional activity, and the gland is finally degenerated by exhaustion, aided by the local irritative action of the *materies morbi*.

The general system suffers less, perhaps, from retained effete matter than from faulty assimilation.

GENERAL SURGERY.

OBSCURE RENAL DISEASE.

BY

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Read to the Philadelphia
County Medical Society,
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G. M. C., aged sixty-eight years, weight one hundred and sixty-four pounds, six feet two inches tall, was sent to me through the kindness of Dr. E. W. Watson, on October 31st, 1888, with the following history.

On April 6, 1886, he had an attack of retention of urine. Violent expulsive efforts forced out a clot. The bleeding continued two or three days. With this he had pain in the right lumbar region. A month later another similar attack occurred, the pain on this occasion being quite severe and amounting to a distinct renal colic. Other attacks, always accompanied by pain and bleeding, occurred in July, 1886, and in January, September, and November, 1887. After the last one, for several weeks he had repeated and nearly continuous hæmaturia with a sensation of heat in the right lumbar region, and he lost strength and appetite.

January 14, 1888, he was taken extremely ill with pleuro-pneumonia and septicæmia. Both legs were attacked with phlegmasia. The dulness in the right kidney, Dr. Watson stated, was increased, but no pus was found in the urine either then or at any other time; neither were any symptoms located in the bladder. This illness lasted about two months.

In May and June of 1888, he again had attacks of hæmaturia, and from September 17 to October 31, 1888, he had nine attacks, passing as much as six or eight ounces of blood, he thinks, in some of the attacks. He has never passed any calculus. In the interval between the attacks the urine was clear. No cause can be assigned for the attacks; not uncommonly they have come on while lying in bed. He states that the right kidney is now the seat of marked aching pain.

Present condition.—He is a very tall man with a disproportionately long chest; from the ribs to the crest of the ilium the space is barely two fingers in breadth. The bladder was sounded, but no stone was found. Its walls were rugose. The prostate not much, if at all, enlarged. Renal dulness on the two sides equal and normal. Right kidney tender. Two specimens of urine were furnished, one with a large bloody sediment, but without clots, and the other clear and acid, sp. gr. 1.022; very slight amount of albumin. Microscopical examination showed no crystalline elements, a few blood discs, granular matter, and a large number of bright fatty-like small globules. Dr. Watson informed me that he had never found any albumin except just after the attacks of hæmaturia, nor has he ever seen any cast.

It was decided to explore the right kidney, either for stone or possibly for cancer, and either to remove the stone or the kidney, as might seem best.

Operation November 3, 1888.—Present, Drs. E. W. Watson, A. W. Watson, W. J. Taylor, and T. R. Neilson.

An oblique incision, four inches in length, was made just to the right of the erector spinæ, and the perinephritic fat was reached. Surrounding the kidney was a capsule so loose and distinct that it required a very careful examination to be sure that it was not the wall of the colon. The lower end of the kidney appeared normal. The finger detected a rather sharp irregularity deep in the substance of the kidney. The moment it was pressed on, both Drs. Taylor and Neilson, as well as myself, were convinced that it was a stone. A needle was then passed into the kidney, and the point of it grated with great distinctness against the supposed stone. The kidney was now seized with a volsella, and was loosened from the surrounding tissues in order to obtain freer access to it. This was followed by two results: First, very abundant, indeed very alarming hæmorrhage,

from large veins that were so concealed under the last rib that they were seized with great difficulty, even after the rib was well raised, and when seized they were so friable that the ligatures would not hold.

The second result of this operation was to disclose the fact that while the small portion of the kidney first discovered was normal, the rest of it was irregular, nodular, and friable, and evidently the seat of a malignant growth. Accordingly, I determined to remove the kidney if possible. It was rapidly detached from its capsule by the finger, but it was so anchored internally at the hilum that it could not be brought to the surface, in spite of the fact that I got my entire hand into the cavity of the capsule.

Having proved the impossibility of removing the kidney by the loin, I debated the question of attempting it by anterior incision, but as the difficulty of removal was not the size of the kidney, but the adhesions at the hilum, I concluded not to attempt an operation by this route, as I felt convinced it would result in the patient's dying upon the table. The hæmorrhage was checked by thoroughly packing the wound with sublimate gauze. The patient was put to bed. He became conscious and recognized his family, but died from exhaustion three and a half hours after the operation.

Autopsy, twenty hours after death. In order to determine whether I could have removed the kidney more readily by the anterior incision, I made this attempt as the first step in the autopsy. An incision was made in the right linea semilunaris. This incision measured four inches in length, extending from the border of the ribs to Poupart's ligament. No more room, therefore was obtained for the removal of the kidney anteriorly than posteriorly. The ribs projected so far downward that, in order to reach the kidney, it was necessary to insert my entire hand up to the wrist. The kidney lay far up under cover of the ribs, and was as inaccessible from the front as from

the back. It was so thoroughly anchored in its position that to loosen it from its bed required force that would have been wholly unjustifiable during an operation, and would have resulted in rupture of the vessels and in immediately fatal hæmorrhage. It would not have been possible to reach and tie the vessels in such an inaccessible position. When removed, the kidney was found to be enlarged, nodular, and distinctly cancerous. The left kidney and other abdominal viscera were normal.

On section of the kidney there were discovered some calcareous vessels and one or two pints of calcification of the other tissues.

The kidney measured seven and a quarter inches in length, four and three-quarter inches in width, and three and one-quarter inches in thickness.

Microscopical examination by Dr. J. P. Crozer Griffith showed that it was an intermediate form between scirrhus and encephaloid, with a decided preponderance in the greater part of the organ of the latter form of the disease.

REMARKS.

First, diagnosis.—This lay most likely between stone in the kidney and cancer of the kidney. Although it seemed unlikely that stone should exist without producing pyelitis and, therefore, showing some pus in the urine, yet I have known of more than one case of both stone in the bladder and in the kidney in which the urine contained no pus. The repeated hæmaturia looked very much toward malignant disease, but the kidney was so under shelter of the ribs that it was impossible to detect any tumor, and the dulness was not markedly increased. The enlargement of the kidney was chiefly toward the hilum, and so the dulness posteriorly was little greater than normal. Mr. Henry Morris states that of 30 cases of cancer of the kidney, found in 2,610 autopsies, 25 were secondary and only 5 were primary. The present specimen is undoubtedly a pri-

mary malignant tumor, and is, therefore, a rare form of disease.

Secondly, the surgical aspect of the case.—In this there are two points of interest: First, the needle test for stone. When the kidney was exposed to view, the only healthy portion of it remaining was first seen. Deep under this an irregular, hard mass could be felt, which might easily be a stone. Puncture by the needle convinced us that it was such. Examination of the kidney after death showed us that no stone existed, but that what was felt by the point of the needle was either a calcareous vessel or a calcareous degenerative mass against which the point of the needle grated. It gave precisely the same sensation as a stone would have done. This possible error seems to me very unusual. I have never seen it noticed, although it may have escaped my knowledge.

Secondly, the advantages of the lumbar or of the abdominal route for removal. As the operation was undertaken primarily for exploration, and no tumor in any sense was discovered, I am clearly of opinion that the lumbar route was the proper one to select. The attempt made at autopsy shows that the kidney could not have been removed any more readily by the abdominal than by the lumbar incision. The peculiar situation of the mass in question, and the low position of the ribs, resulted in the curious fact that while the space between the last rib and the crest of the ilium was only two fingers in breadth, yet the oblique incision here of four inches was long enough for removal, and it could have been still further prolonged anteriorly if necessary; whereas, the vertical incision from the rib to Poupart's ligament was absolutely limited to four inches, and the kidney was certainly no more accessible by this route than by the other. The removal of the kidney was practically impossible by either method. The inflammatory attachments—especially around the hilum and the great vessels of the kidney—required an amount of force

that would have been unjustifiable during life.

DISCUSSION.

Dr. DeForest Willard: I was unfortunately detained, and did not hear Dr. Steinbach's paper, but I understand that in his case the abdominal incision was employed. In Dr. Keen's case the lumbar incision was employed at the operation, but that at the post-mortem an attempt was made to remove the kidney by an abdominal incision in the semi-lunaris. I do not consider that this question in regard to the incision to be employed, is yet settled. As a rule, however, the anterior median method offers better opportunities for diagnosis, for examination of the other kidney, and for safe removal. In cases where a stone is suspected, or the presence of pus is probable, the lumbar incision is certainly proper, the operation may be simply a nephrotomy and not a nephrectomy, and then we have drainage. In simple purulent kidney, it is better to secure drainage and not remove the kidney. The results, so far as life are concerned, are better by this method. In tuberculous kidneys, the results of nephrectomy have been more satisfactory. In Bardenhauer's statistics,¹ numbering some thirty-five nephrectomies, where twenty-five were for purulent kidney of various forms, the mortality was not much higher than in ordinary nephrectomy. Out of thirty-five cases he lost ten.

The choice of the incision will depend largely upon the condition of the case, and upon the diagnosis. Many nephrectomies have been performed after the abdominal incision has been made for other purposes, as when the ureter has been cut in laparotomy. I do not know why it is better, but Schmidt recommends that in such cases the kidney be removed by the lumbar incision. It seems to me that this would decidedly delay the operation, and would be more likely to cause contamination of the abdominal cavity. I do not think that the

results are much more serious in the anterior operation than they are in the posterior.

My practical experience has been limited to two cases, one for gunshot wound, and the other for a tuberculous kidney, but in both I employed the anterior median route. In the first case there were evidences of wounds of other organs. In the latter case the kidney was pushed far anteriorly, and I thought the abdominal incision the better one.

The difficulties of the lumbar operation are certainly much increased where there is only a short space between the twelfth rib and the crest of the ilium. In Dr. Keen's case he found it impossible to reach the hilum; if he had employed the median incision at the post-mortem operation, instead of the incision through the the linea semi-lunaris, he would have been able to have reached it without difficulty.

In regard to the sutures to be employed in *nephrorrhaphy*, I think that the failures have resulted from the use of catgut. We must employ a permanent suture, which will hold for a long time, and anchor the kidney until it is thoroughly fixed in its position. The question of decubitus is of importance. A month is the shortest possible time we can expect any fixation. The use of pads is very unsatisfactory. We are obliged to apply the pad upon the abdominal walls to an organ that lies deep in the loins with the intestines in front of it. We cannot hope to hold it in position by any such means. Therefore the dorsal decubitus should be maintained for a long time.

Dr. M. Price: The case of Dr. Steinbach is certainly a very interesting one, and I see no other course save that which he tried, of operating by the abdominal method. Even in Dr. Keen's case, where he states that the first idea was an exploratory operation, I think that the anterior method would have been better. I think it is the better plan, even if after making the diagnosis you close the abdominal incision and remove the kidney by the lumbar

¹ Berlin klin. Woch., October 15, 1888. Philadelphia Medical News, December 1, 1888.

method. An incision one and a half inches in length affords ample room for the examination of all the organs. I have twice examined both kidneys through such an opening. In one case of supposed gall-stones, I found the viscera attached to the abdominal wall. After separating them I examined the kidneys without difficulty, and found them in good condition. In the case where I removed the kidney, I had no difficulty in feeling both kidneys through a small abdominal incision. I think that if Dr. Keen had made the median abdominal incision, and found the kidney so seriously diseased, he probably would not have made as great an effort as he did through the lumbar incision.

Dr. Steinbach, in his report, does not state whether or not he used drainage. My impression is that the anterior route is the best for drainage, which, in these cases, is of paramount importance. So much tearing is done in releasing the kidney that drainage for twenty-four or forty-eight hours is necessary, or at least can do no harm. I do not believe that any drain answers its purpose so well as one that can be cleaned by the attendant or nurse. The best method to stop oozing of blood is to keep it cleaned away. Keep no blood in contact with the bleeding vessel.

I consider the danger no greater by the anterior than by the posterior method. It is the only method to employ in cases of gunshot wounds.

In regard to the use of morphia, I differ from Dr. Steinbach, unless he had made up his mind that the patient was going to die. I believe that morphia has a tendency to cause suppression of the urine. It also lowers the vitality and assists in killing the patient. I should not think of using morphia in abdominal cases unless the patient were dying. Where morphia has been used in surgery, and especially in abdominal surgery, I have had cause to regret it.

Dr. John B. Deaver: I may say a word in regard to the choice of incision. I have

operated both by the abdominal and lumbar method. I consider that the anterior incision is preferable in cases of solid growths, particularly where they have reached any size. We run greater risks in attempting to break up the adhesions to the capsule by the lumbar incision, where we cannot see what we are doing, than we do through the anterior incision.

The proper course is, I think, to go through the linea semilunaris. This brings us nearer to the organ, and gives a better opportunity to work to the outer side of the colon, which is important, as the bloodvessels are in relation to the internal layer of the meso-colon, and not with the external layer.

In cases of liquid accumulations in the kidney, I do not think we operate with quite as much facility anteriorly as posteriorly. The lumbar incision affords better opportunities for drainage under these circumstances, but drainage can be satisfactorily accomplished by the anterior method by the glass drainage tube.

The abdominal incision affords us better opportunities for the examination of the neighboring organs. For purposes of diagnosis it is more satisfactory than the operation through the loins.

There is no doubt that in nephrorrhaphy the proper form of suture is antiseptic silk. I know of one failure resulting from catgut. It is probably impossible to pass sutures through the capsule without also involving the substance of the organ, yet I think that if we could avoid wounding the kidney it would be better. I have no doubt that the appearance of albumin in Dr. Keen's case after the operation, was due to the sutures.

In regard to the meso-nephron, I have seen several cases of floating kidney in the dissecting-room, and I have yet to meet with an instance of reflection of the peritoneum which could be called a meso-nephron. While I would not differ from so distinguished an authority as Dr. Morris, yet I have not met with this condition.

The question of the removal of solid growths of the kidney is largely influenced by the age of the patient. It is almost useless to operate for carcinoma of the kidney in early life or in late life, so that the middle period offers the best chances for a favorable result in these cases.

Dr. Thomas R. Neilson : In looking over the literature of nephrectomy, one is struck by the variableness of operators as to the method chosen to reach the kidney; and the remarks that have been made to-night clearly illustrate this. One writer will prefer the lumbar incision, another will select the abdominal method, while a third will use either plan, and yet in all the instances the disease may seem to be about as extensive and the size of the kidneys may be the same. A great deal depends upon the choice of the operator, as well as upon the condition and proportions of the patient.

The statistics of the removal of the kidneys for malignant diseases are so unfavorable that any operation seems to be almost hopeless; nevertheless, I do not think that, in individual cases, this should be a contra-indication if the operation seems to be justifiable on other grounds. In children, the statistics of Dr. Gross, in 1885, were that in thirteen operations only four recovered from the operation, and these subsequently died from return of disease elsewhere.

In operating in cases of wound of the kidney, it would seem to be guided by the position and extent of the wound. If the wound involves the abdominal viscera, no one would hesitate to open the abdomen. On the other hand, if there were any doubt, the course of the wound should be followed and the kidney reached and explored. If there are marked signs of hæmorrhage, the operation should be performed at once. Even if the hæmorrhage is retro-peritoneal, it may be assumed that, sooner or later, the clot will by pressure force its way through the peritoneum and cause septic peritonitis. Careful exploration and thorough drainage in these cases is absolutely requisite. In

sulparietal wounds of the kidney, if operation be necessary, it would seem that the only choice is the lumbar incision. As illustrating the tolerance of the kidney for a certain degree of injury to its substance, a point to which Dr. Keen has called our attention, I may mention the following case: Some years ago I saw, at the Episcopal Hospital, a man who was brought with a large hæmatoma of the back, the result of being struck in the loin by the buffer of a locomotive. He recovered without operation. A year later he returned to the hospital with symptoms of stone in the bladder. At the operation, instead of a stone, there was found a spicule of bone, one-fourth of an inch wide, and one-half or three-fourths of an inch long. I assume that there had been fracture of one of the lower ribs, a fragment of bone being driven into the kidney or its pelvis, and later finding its way into the bladder.

Dr. Henry F. Formad: I rise to protest against the rather loose pathological nomenclature in regard to malignant disease of the kidney. We hear of cancer of the kidney and of sarcoma of the kidney. Alveolar sarcoma and cancer are used synonymously. This is Virchow's view. According to modern views all of these things are sarcomas. Again, there is no such thing as epithelium in the kidney. There is only epithelium which cannot give rise to cancer.

It is a true mesoblastic growth which can only give rise to sarcoma. We can take for granted that all of these cases reported as cancers are sarcomata.

In sarcomata there are sometimes hemorrhagic infarctions which give rise to indurated masses, and on section give to the growth the book appearance of cancer.

It is a well established fact that tumors of the kidneys and of the supra-renal bodies will not encroach upon surrounding structures. They do not cause metastasis; so that removal of the diseased kidney to prevent the spread of the disease is unnecessary. In view of the bad statistical results I think that it would be better if these cases of

malignant disease of the kidney were let alone.

I have a point to make in regard to floating kidney. I began to record the occurrence of floating kidney, having pretty good opportunity to do so. I was so successful that every day I found a floating kidney. I began to investigate and I found that every woman had a floating kidney. The right kidney of nearly every woman is so loosely attached that floating kidney on the right side is a normal condition in woman. Actual floating kidney is merely a question of degree. When you attempt to reach the right kidney in autopsies on women it is difficult to find it, as it is never in the same place. It never lies in close proximity with the liver as in man.

Dr. William J. Taylor: I had the pleasure of assisting at the operation of Dr. Keen and would emphasize the fact of the tremendous hemorrhage, and also the extreme density of these calcareous masses. They felt exactly like a stone.

Dr. James Tyson: I would say a word with reference to the etiology of floating kidneys. I have had a number of such cases under observation. In searching for the cause, I have been compelled to conclude that in the majority of instances it is congenital, and what has been stated by Dr. Formad serves to strengthen this view. I have seen most typical instances of floating kidney in men, and I have seen it more frequently in women who have never borne children than in those who have had children. Even in those cases where it is supposed to have been caused by accident, I think that in all probability the condition has been congenital, and, if anything, only exaggerated by the fall.

In regard to the treatment of floating kidney by the use of pads, etc., I have had surgeons in consultation in cases of this kind and I have never seen any advantage result from such devices.

Dr. William Hunt: I have recorded a case in which a fast kidney was found in

the wrong place, which might confuse an operator cutting for the organ on account of symptoms. Some years ago I made a post-mortem at the Pennsylvania Hospital on a man who had died of concussion of the brain, in which I found the left kidney, enveloped in its capsule, lying upon the fourth and fifth lumbar vertebræ and partly covering the promontory of the sacrum. The sigmoid flexure passed along its outer and superior edge, while the rectum ran along the inner edge and from thence down the middle line of the sacrum. The emulgent vessels entered from above through a fissure in the kidney, leading diagonally from the superior edge to the pelvis.

The pelvis of the kidney and the ureter were normal, though of course the latter was shorter than usual. The sigmoid flexure embraced the kidney in its folds. This must be a very rare anomaly.

Dr. J. M. Baldy: As regards the relative value of the lumbar and abdominal incision, the abdominal seems to me to present several points of advantage. Through the abdominal incision both kidneys can be reached with little difficulty. In all these troubles it is important that the second kidney should be examined, if the removal of one is contemplated. Where the lumbar incision is adopted this is, of course, impossible, and the difficulties of examining even the diseased kidney are well shown by the case under discussion. In the abdominal operation, the condition of the kidney could be determined, and just such accidents as happened in Dr. Keen's case—the stripping off of the capsule and the dangers of hemorrhage and shock—would be averted.

There is great importance in drainage. A tube that can be kept clean, is the drainage tube *par excellence*—the glass tube is such.

In one case of malignant disease, in which I witnessed the removal of the kidney by the abdominal incision, the hemorrhage not being entirely controlled, the

peritoneal cavity was entirely closed off from the bed of the kidney by stitching the cut edges of the peritoneum together; prior to this, however, a counter opening was made through the muscles of the back, and thus good drainage secured. The patient made a good recovery.

Dr. John B. Roberts: I wish to refer to a case of cure of movable kidney without operation. I had a boy, seven years of age, referred to me four years ago by Dr. M. O'Hara. At irregular intervals the patient was seized with severe pain in the left side of the abdomen, and with this there was the appearance of a tumor in the hypochondrium and total suppression of urine. Various theories had been held to explain the condition. The only conclusion that I could reach, although this was not concurred in by Dr. O'Hara, was that the boy had a floating kidney, and that at the time of the paroxysms, the ureters became twisted, causing the suppression of urine and the intense pain. The boy never had any pain or trouble with the urine, except when the tumor was felt. At my suggestion Dr. O'Hara had made a pad which pressed against the left hypochondrium. This was worn for a short time. The boy then passed from my notice, but I learned a few days ago that he had perfectly recovered. There is, of course, in this case an element of uncertainty in regard to the diagnosis. When I looked into the literature of this subject, I was surprised to find how much stress was laid upon the possibility of the ureters becoming twisted, and the flow of urine being interfered with.

I wish in connection with the question of the lumbar incision to refer to an accident which I had in an attempt to explore the kidney for a supposed renal calculus. After making the incision down to the kidney, I determined to enlarge it a little. The diaphragm hung down in a fold and was readily seen. I made my incision a little longer in the upward direction, and made a minute perforation in the diaphragm where

it is attached to the spinal column. There was a loud whistle as the air rushed into the pleura. I put in a suture and closed the opening, and no harm was done; but for a few days the patient insisted that the bandage was too tight, because he could not breathe freely. The pain which the patient had felt disappeared after the operation, although no stone was found. He went home before the wound had closed, and a number of months later died of some obscure disease.

It is important to recollect, when operating close to the vertebral column that the posterior attachment of the diaphragm near the middle line extends further down than might be realized from watching its loose muscular curtain exposed in the wound.

Dr. G. G. Davis: Dr. Formad seems to characterize all these growths as alveolar sarcoma. In primary growths of the kidney this may be correct, but such a statement gives one the idea that there is a sameness about these growths which is not the case. The tumor presented by Dr. Keen has the microscopic appearances of scirrhus. In other specimens the growths may be smooth, resembling sarcoma found in other parts of the body. The microscopic appearances of these tumors are decidedly different. When it is said that all growths of the kidney are alveolar sarcomata, I think that a mistake is made. Is not the kidney subject to secondary growths? We have an illustration of this in the case of Dr. Grove's. In his case, the first manifestations at least were in the axilla. In the report of the microscopical appearances, I did not hear the term alveolar sarcoma used. The disease of the kidney was what is commonly known as melanotic sarcoma. It was not supposed that the organ was the seat of a growth peculiar to the kidney.

Dr. Henry F. Formad: I do not want to be misunderstood. I did not mean to say that all tumors of the kidney were alveolar sarcomata. We have other forms of sarcoma, but what is commonly called cancer

is alveolar sarcoma. Secondary growths of any character may occur, and even cancer may be secondary; but it will be only an insignificant part of the general disease.

Dr. S. Solis-Cohen: The administration of morphia in these cases has been referred to. It is extremely dangerous to use morphia in any case in which the kidney has been treated surgically. I have seen several medical cases in which the use of morphia has produced suppression of urine. This point should be borne in mind by surgeons in the treatment of these cases.

Dr. Steinbach: I had expected criticism in regard to the diagnosis of my case, but nothing has been said on this point, and I have therefore little to reply to. Reference has been made to drainage. I was prepared to drain, but there was practically no hemorrhage, and the whole procedure was perfectly clean, so that drainage was not required.

The dose of morphia given was very small, and was administered without my personal knowledge. We have a house mixture containing small quantities of bromide and morphia. One dose of this was administered by the house physician. I do not use morphia after other surgical operations, and certainly would not use it in such cases as this unless strong indications existed.

Dr. W. W. Keen: I think that there is no doubt that in the case of a large tumor of the kidney, particularly a large solid tumor the size of which cannot be diminished by tapping, the position taken by several of the speakers is correct—that the anterior incision is the proper one. Where there is a small growth, or a stone in the kidney, or the operation is an exploratory one, I cannot think that the anterior incision is the best. Statistics certainly show that the lumbar incision is attended with much less risk than the anterior. Where there is no reason to suppose that an unusual amount of room will be required, I

think the lumbar incision is the proper one to employ.

It has been also suggested that possibly the anterior incision in the present case of nephrectomy would have given so much information that I should have decided not to operate. I do not think that I should have reached any such conclusion, for it was not the character of the growth, but the adhesions at the hilum that interfered with the removal of the organ, and these could not have been determined until the operation was in progress. I think that it would have been as impossible to remove the kidney by the one method as by the other. I had the pleasure of seeing Dr. Steinbach's case, but only for a moment just prior to the beginning of the operation, and I certainly was convinced that it was a case of enlarged gall-bladder with gall-stones. The slightest movement caused a grating of one stone upon the other. The tumor was in the position of the gall-bladder. I never before saw a kidney so displaced. The long axis, instead of being vertical, lay in an antero-posterior position, and the upper end of the kidney occupied precisely the position of the gall-bladder. The steps of the operation have been well described by Dr. Steinbach, and I have nothing to add. The mistake in diagnosis, under these circumstances, was very natural.

QUESTIONS ANSWERED.	The writer is frequently in receipt of letters asking advice in regard to the treatment of rectal troubles. In the future if letters of this kind are directed to PROGRESS careful answers will be given through its columns. M.
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THEY SHOULD BE QUALIFIED.	No one should think of adopting a speciality in medicine or surgery until at least five years have been spent in the general practice. This advice holds good in rectal practice as well as in the older and better known specialities. M.
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STAB AND SHOT WOUNDS.

Obstetrical and other observations of a "Wet Woods" Doctor

BY

ROBT. T. DURRET,

M. D.,

MINOMA, KY.

Before giving some of the hardships and glories of the physician, the writer will give a sketch of the Wet Woods. This is a section of country heralded by all the Louisville newspapers, for the past forty years, for its mud roads. It is a narrow strip of land extending from the L. & N. railroad to the Bardstown turnpike and five or six miles long. It includes the "ash bottom," and once famous lost island. It was once upon a time believed that no lone traveler ever made his exit from its dense forests of ash, gum, oak and entangled shrubs overhung with hyacinth vines, unless he was accompanied by Sol. Baker.

Sol. knew every tree that had a knot on it; every tree that contained a colony of bees or a den of coons, the foot prints or paths of the bear, bison and wild turkey. These, together with the many wild boars of the jungles, Sol. considered that he had a primitive right to claim.

This land about thirty years ago, was bestudded with huts, many of them built of poles or rails covered with brush and occupied by a migratory race of men, women and children, whose principal object was to cut wood, clear the land, and as soon as their homes were brought to daylight they moved away to other living plans—like the deer, buffalo and bear, they could not stand the advance of civilization. But how different the scene now from twenty years ago since this land was cleared, ditched and tiled! It has become as productive of corn and hay as the best bottom lands of the Ohio river. And the people of this seemingly Godforsaken country often needed a doctor and a charitable one.

The most serious obstacles with these "squatters" was to find a little piece of high ground to build a shanty on. For before draining, the water stood for several months from one to three feet deep; but still they

did build, lived, moved, multiplied, and all that without missionary aid.

In 1864, I. M., a large dealer in charcoal, came for me to visit his burner; found him with Auntie Minoma laying in a rail bunk full of leaves and grass, and that within a rail pen covered with brush. He got well, and when asked by the dealer for my bill, he was told to buy calico and buttons enough to make the old woman and her children an outfit, and that would pay the bill.

Tom Bowles, a wood-chopper, while at a Wet Woods frolic was stabbed by an adversary with a pocket knife, about half way between the umbilicus and pubes; the small bowels escaped through the opening until it seemed to me the next morning, nine hours after the injury, that they had all come out and had been lying on a rough puncheon floor all night. They were, with the free use of warm water and patience replaced with much difficulty. Tom was fed on ice cream and whisky, vomited incessantly and had a hard time; he, however, wouldn't die and pulled through and lives yet. An artificial anus was provided which lasted Tom for eight or ten years.

In 1865, was called to see Mrs. —; was told she was in labor; found that she had given birth to a child twenty hours before. The child was dead, lying between her legs. The placenta was attached; this woman had a good recovery.

John P., struck by a small stone thrown by an opponent on the crown of left side near the junction of the occipito parietal bones. In a few days afterward, a town Doctor pronounced the case typhoid. When I saw the case, well marked symptoms of inflammation of the brain were presented. The patient did not entirely lose his identity; got on his feet and went hunting. While out he called to see me, and said that the report of his companion's gun so startled and shocked him that he was afraid to fire his own. He soon relapsed and in a few days began to lose his identity. Dr. W. O Roberts undertook to trephine, but finding the inner table

sound, did not finish the operation. A post mortem examination disclosed an abscess at the base of brain about the size of a hen's egg.

Dr. Frank McCauley, of Mud Creek, who has more practice than all the rest of the Wet Woods M. Ds., (the Dr. is a large man, weighs over 250 pounds, with but one leg) says he was called to see a woman in her first labor—a wood-chopper's wife. After making the usual examination, he began to look around him for a chair, stool or something else to sit on to rest his weary body, but there was nothing in sight. He looked under the bed and saw to his joy a huge pumpkin; rolling it out he made himself quite comfortable upon it, and spent the night in obstetrical attentions.

Bob Wright and Jim, his brother, were out hunting and concluded to try which of their guns shot the hardest. They therefore placed the muzzles of their guns together and fired. Bob's gun went off first, and the whole load of Jim's gun, wad, powder, shot and buttons of pants, took a glancing direction at the lower third of Bob's belly, taking in its course the abdominal walls to the peritoneum and lodging in the left ilium. Shot, wads, pieces of clothing and buttons were removed; some shot penetrated the peritoneum. Bob had acute peritonitis, followed by a sloughing wound. He had a hard time, but worried through and is to-day a strong healthy man.

Robert Earmel was thrown from a horse and lodged upon a fence stake. The force was such as to produce a lacerated continuous wound through which the bowels protruded. Bob's father, a farmer, replaced the bowels and sewed up the wound. Bob never had an unfavorable symptom.

NO MORE SUBLIMATE.	Bichloride of mercury has about had its day in ophthalmic surgery. The almost constantly observed opacity of the cornea after cataract extractions lead M. Panas to suggest the protoiodide of mercury as an antiseptic lotion, and it has come into almost universal use.
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NEPHRORRAPHY
FOR FLOATING
KIDNEY.

BY
W. W. KEEN,
M. D.
*Professor of Surgery in the
Woman's Medical College
of Pennsylvania.*
Read to the Philadelphia
County Medical Society,
March 27, 1889.

Miss E. J. F. of Sunbury, Pa., aged thirty-five, height four feet eleven inches, weight ninety-two pounds, was sent to the Woman's Hospital on October 8, 1888, by Dr. Mary A. McCay, with a diagnosis of floating kidney. For the fol-

lowing notes I am indebted to Dr. Chapin and Dr. McKee, resident physicians. The patient was delicate as a child; menstruation began at fifteen, and was always painful and irregular. At eighteen years of age she was thrown from a wagon, falling forward with considerable force on her chest and abdomen. Shortly after the fall she suffered with a severe pain in the right side and a great deal of distress across the back. Menstruation ceased for six months, and was followed by dropsy and severe illness. There was frequent inclination to vomit, and a great deal of palpitation of the heart. In spite of constant medical attention, she dragged out a miserable existence. About seven years after the fall she noticed a movable tumor in the abdomen, which Dr. McCay believed to be a floating kidney.

Present condition.—Appetite and sleep poor; urine 1020, slightly alkaline, twenty-nine ounces in twenty-four hours, no albumin, no sugar. Heart and lungs normal; uterus retroflexed. In the right abdomen was a tumor, about the size of the kidney, which could be freely and easily pushed two or three inches to the left of the middle line back into the right lumbar region, or down into the right iliac fossa. Neither the hilum nor the blood-vessels could be distinctly made out. Percussion over the position of the right kidney showed a tympanitic note, the left renal dulness being distinct and normal. The tumor was evidently not connected with the uterus, ovary or liver.

Operation, October 26, 1888.—Ether was administered. An oblique incision was

made at the outer border of the quadratus lumborum, four inches long. So soon as the abdominal fat was discovered, search was made for the kidney. The colon was first found, but the kidney was absent from its normal position. Strong pressure being made on the abdominal tumor, it was partly pushed back into position, but could even then only be touched by the finger-tip. On separating the borders of the incision by retractors, it was seen to be the kidney bare of all fat. In order to replace it entirely, it had to be seized by a volsella. Seven carbolized silk sutures were next introduced by a Hagedorn needle, four posteriorly and three anteriorly, through the capsule and substance of the kidney, by which it was attached to the muscles and aponeurosis of the abdominal wall. Seven deep sutures of chromicized catgut were then introduced through the entire muscular wall of the loin, but they were not tied, as I intended that the wound should remain open for a few days, if not permanently, in order to produce cicatricial tissue between the kidney and the muscular wall. No provision for drainage was necessary of course. The wound was covered with an ample bichloride gauze dressing. Her recovery was entirely uneventful. Her highest temperature was 100.9°. The urine was entirely free from any blood, though the bladder was irritable, and the catheter had to be used for several days. The wound was so completely filled up within the first forty-eight hours, that I removed the stitches that had been passed through the muscular wall. I kept her flat on her back for four weeks, when she was allowed to rise for a short time. There was considerable, apparently rheumatic pain in the small of the back for three or four weeks after the operation, which disappeared and again reappeared, and which seemed to be benefited by salol. Seven weeks after the operation there was a moderate amount of albumin in the urine, which disappeared after the use of Basham's mixture for three weeks. Soon after she

got out of bed, I tried the effect of a pad to support the kidney in front, but its use caused so much discomfort that I abandoned it, trusting wholly to the silk sutures and cicatricial tissue to hold the kidney in place. The tumor formerly discovered in the abdomen was entirely gone, and the normal renal dulness reestablished, though a little lower down. She went home on the 5th of January, 1889. I heard from her to-day, March 16, 1889, and she says: "My back is still weak, but the pain is fast disappearing. The kidney is still firmly anchored and I feel better generally. Words cannot express my gratitude to you for what you have done for me."

REMARKS.

First, the cause.—

A lax abdomen following frequent pregnancies has been supposed to be the origin of floating kidney, as it is of floating liver. In the case here narrated, the patient was unmarried, and the abdominal wall was not at all lax. Again, the absorption of the perinephritic fat was at once encountered. But it was a noticeable fact that the kidney itself was entirely free from any fat. In other words, the fatty bed in which the kidney should lie was in its proper place, but the kidney was displaced and there was no fat on the kidney itself. It seems reasonable to conclude that the dislocation of the kidney was due to the fall at the age of eighteen, though the abdominal tumor was not discovered till seven years later. Landau, who has written the best monograph both upon floating kidney and floating liver, states that of 314 cases of floating kidney, 273 were in women as against 41 in men. In 168 cases, it existed on the right side in 151, on the left in 13, and in 14 on both sides. The present case being in a woman, and upon the right side emphasizes still further his statistics.

*Secondly, the symptoms.—*Digestive disturbances, especially constipation and very fetid breath, were not marked, though they were present to a moderate degree. The

chief trouble was pain and constant discomfort, which was not only physical, but mental; the very existence of the tumor being a source of constant worry. The tumor itself was not especially tender to the touch, but it created a constant aching pain. Neither the hilum nor the pulsating renal artery could be distinctly made out, but the character of the tumor and the altered renal dullness made the diagnosis quite clear.

Thirdly, the treatment.—Recumbency alone has been advised by Landau, but this seems to me altogether too expectant. Only the most sanguine could believe that by this treatment, if such it can be called, a kidney would resume its normal position and quietly continue there sufficiently long for the adhesions to be reestablished with any prospect of permanency.

I did not try any treatment by pad or bandage, as the patient was from a distance and could not remain the long time necessary to decide whether such palliative treatment would answer. On the other hand, extirpation of the organ was equally foreign from my thoughts. In my opinion, this should only be done after failure of an attempt at fixation. The danger to life of a floating kidney is absolutely *nil*. It is, therefore, only to remedy the discomfort that exists that we operate. Hence, I do not think extirpation at all justifiable unless we first attempt to fix it *in situ*, and having so failed, it is only justifiable even then in case the discomfort is very great. Dr. Maurice H. Richardson (*Boston Med. and Surg. Journal*, June 14, 1888), who has published an excellent paper with a full bibliography, quotes from Brodeur the following figures: Of 235 nephrectomies, 125 were done by lumbar incision, with 47 deaths (37.6 per ct.) 110 by abdominal incision, with 55 deaths (50 per ct.). As against this large mortality from nephrectomy, however, Gross has collected 17 cases of nephrorraphy, with only one death, a mortality of only 6 per cent. It should be added also, that in the fatal case, (Ceccherelli, *Centralblatt fuer Chir.*,

1884, 44, 743), the surgeon passed the stitches around the twelfth rib, a procedure which is absolutely needless as well as dangerous.

Hahn (*Centralbl. f. Chir.*, 1881, p. 449) first proposed fixation for a floating kidney by operative procedure, and practically perfected the operation. The operation is simple. The patient being laid upon the side an oblique incision is made at the outer border of the quadratus lumborum. The edge of this muscle being recognized, the perinephritic fat is found immediately in front of it, at its outer border. This fat having been cut or torn through, the kidney may be seen at once; but, if it is very movable, it may be so far misplaced as not to be seen or, as in the present case, may be even felt with difficulty by the tip of the finger, even when an assistant pressed it firmly back through the abdominal wall.

Mr. H. Morris (*Surgical Diseases of the Kidney*, p. 45) makes a distinction between a kidney which has no mesonephron but moves about freely behind the peritoneum, this being called "movable kidney," and a "floating kidney" which does possess a mesonephron, and therefore floats freely in the peritoneal cavity. In cases, therefore, of a strictly floating kidney, it would be necessary to open the peritoneal cavity before it could be fixed in the loin. This distinction is confirmed by the four cases of section to which Mr. Morris refers. Comparing them with the present one, the range of movement to the left of the umbilicus and into the right iliac fossa was so great in this case, that it would seem proper to call it a "floating kidney," yet, at the operation, no renal mesentery or mesonephron was found. The probable mode of its production would also militate against the existence of any mesonephron. The kidney was far away from its normal position, but when pushed back into its proper place no layer of the peritoneum could be found that by any possibility could be called a mesonephron, and the peritoneum was certainly not opened.

In spite of the fact that Paoli (*Centralbl. f. Chir.*, 1885, 51, 910) cut through the twelfth rib in order to obtain room, it would seem to be rarely necessary to do so. When found and pressed back, the kidney should be fixed as nearly as possible in its normal position. Usually it will be impossible to replace it as high as it was at first, but lowering the site by two inches is not uncommon and seems to be of no importance.

The sutures that have been employed (either of silk or of catgut, disinfected, of course) may be passed (1) through the capsule of the kidney, or (2) through the parenchyma and capsule both, and may either be (3) left permanently or (4) removed. In this case I employed antiseptic silk, which I consider decidedly the best, and passed the stitches not only through the parenchyma of the organ itself, three on the anterior surface and four on the posterior, stitching the kidney to the muscles, and what I consider more important, to the aponeurosis, which exists on each side of the incision. Finally, these stitches were not removed, but were left *in situ*. I believe with Svennson (*Centralbl. f. Chir.*, 1886, 824), that many failures have been due to employing absorbable catgut to the avoidance of passing the stitches through the substance of the kidney, and to removal of the stitches, which in all cases I think should be left in, whatever the material employed. Svennson inserted as many as fourteen silk stitches, which were left in place and caused no trouble. The wound is best left to heal by granulation. I introduced a number of stitches to close the abdominal wall if necessary, but in twenty-four hours it was so filled up that it was evidently a needless precaution. The larger amount of cicatricial tissue that is produced by leaving the wound to heal by granulation probably fixes the kidney more firmly.

Another very important point is, that the patient should lie flat on the back for at least a month after the operation, in order that the cicatricial tissue binding it in place

may become thoroughly developed and firmly established. Even then, I would advise some support for the kidney in front by a pad or bandage, provided the patient bears it well. In this case I soon abandoned it, as it caused too much discomfort. It is to be noticed that though the stitches were passed through the kidney substance, the patient had no hematuria (this was carefully watched for) and that no inflammation or reaction seemed to follow. But seven weeks after the operation considerable pain developed in the region of the kidney together with some albuminuria. This disappeared, however, after the use of Basham's mixture. The pain seemed to be rheumatic, and was soon relieved by the administration of salol.

ANIMAL SUTURES.

Whatever may be said of the apparent necessity for a suture which may be safely left in situ, it is an undeniable fact that nearly every American surgeon has abandoned cat gut, silk-worm gut, and none employ the kangaroo tendon, so much in vogue in London. The silk suture, it has been shown, may be employed in intestinal surgery with perfect safety. It is employed in hysterectomy for ligating the tubes; it is used in the ligation of deep-seated arteries; it is relied upon, in fact, wherever a ligature or stitch is wanted to remain concealed. In ophthalmic surgery Professor Hirschberg has given much prominence to carefully prepared catgut, but it does not appear that he has many followers. The gut suture in pterygium causes an ugly nodule to take the place of the stitch, and this gives rise to mechanical irritation from the excursions of the lids. It requires a very considerable amount of preparation to properly employ any of the gut or tendon sutures, whilst sewing silk, soaked in carbolic acid, half drachm to the ounce of water, is always ready for use, easily tied, holds well and may be left in concealment or afterward removed with entire indifference.

NEPHRECTOMY.

BY

L. W. STEINBACH,

M. D.,

Read to the Philadelphia
County Medical Society,
March 27, 1889.

On July 17, 1888, Mrs. Anna H., forty-four years old, from New Jersey, was sent by her attending physician to my department at the Polyclinic

with a statement that she had been under his care for about a month, that she presented symptoms of hepatic and gastric disorders which brought about anæmia, nervousness, and irritability of the heart. She complained of indigestion, frequent vomiting of food or of mucus, attacks of palpitation of the heart, and loss of flesh. One week ago his attention was directed to an induration in the right hypochondriac region and, deeming it of serious import, he referred the patient to our clinic.

From her own statements and those of accompanying friends we gathered, in addition to the above, the following history:

Mrs. H. was formerly a hard-working country woman, who bore six healthy children, but had had no miscarriages. She suffered in several of her confinements with puerperal mania, but considered herself in good health until eleven years ago, when, she thought, she became dyspeptic. Five years ago she noticed a lump in her abdomen, of which she made no mention to anyone until one month ago, up to which time she was able to attend to her household duties. She complains of headaches and constipation, and has not noticed any sediment in or discoloration of the urine, nor could she recall having suffered with pain that would indicate the passage of a biliary or renal calculus. Her pulse, respiration, and temperature are normal, she looks anæmic, the complexion is muddy, her conversation and behavior indicate the existence of some mental weakness, the body is emaciated. Inspection shows a prominence in the right lumbar region, whilst percussion and palpation reveal the presence of a tumor extending from the lower border of the ribs vertically for about

seven inches, and, laterally, occupying the centre of the lumbar region to the extent of three inches. The percussion dulness is continuous with that of the right lobe of the liver. The tumor is freely movable below, and felt through the thin abdominal walls imparts the sensation of a bag filled with small pebbles. Believing that the case before me was one of a gall-bladder filled with calculi, and fearing lest manipulation would cause rupture of the cyst, I desisted from further palpation and directed my inquiries toward finding other symptoms of biliary obstruction. I drew off the urine with a catheter and submitted it to a chemical analysis, which showed the absence of albumen and the presence of some bile-pigment. No particulars of the nature of the stools could be obtained. In a letter directed to her physician, I gave it as my opinion that the patient was suffering from the effects of an enormously distended gall-bladder filled with calculi, and recommended a cholecystotomy.

One week later, she returned with the consent of her physician ready to undergo the proposed operation. After a preparatory treatment by baths, a laxative and rest in bed for two days, and after a consultation with my assistants and the physicians composing my class, in which the existing symptoms, and especially the absence of pronounced jaundice, were separately and carefully considered, I believe there was no more reserve in the minds of these gentlemen than in my own that the former diagnosis was the correct one. Dr. Keen also hastily examined the patient, concurred in the diagnosis and lent his kind assistance in the operation.

On July 26, the patient being anæsthetized with ether, an incision three inches in length was made in the right linea semilunaris, over the most prominent portion of the tumor, beginning at the border of the ribs and dividing the abdominal muscles and peritoneum; the apex of the tumor was reached without encountering any of the ab-

dominal viscera. The calculi could now necessarily be felt more distinctly than before the division of the abdominal wall, and meeting with difficulty to place the tumor on the trough-shaped apparatus devised by Dr. Keen, it was decided to pick up a fold of the cyst between two pairs of hæmostatic forceps and make an incision between the forceps, so that the calculi might be removed without permitting the escape of bile or mucus into the peritoneal cavity; this was accordingly done, and a few pieces of calculus removed, which, however, did not correspond in shape, color, and general appearance to calculi of biliary origin, especially when the forceps grasped a stone evidently of large size and immovably fixed.

The idea of impacted gallstones was dispelled by the appearance of these calculi, and the thought that flashed upon the mind of every one was, that the tumor was a kidney.

The fear of rupturing the normal gall-bladder having suddenly vanished, the lips of the abdominal incision were drawn apart more freely, which brought to view the margin of the right lobe of the liver and a normal gall-bladder in its normal position.

Further examination showed the tumor to be the right kidney distended by several calculi of different shapes and sizes. The organ itself was twisted by being turned upon its vertical axis from behind forward and to the left, and upon its horizontal axis from above downward and from behind forward, so that the dorsal surface and the upper end presented at the anterior abdominal wall.

It was now at once decided to remove the kidney, a superficial examination indicating the existence of a kidney on the left side. The pedicle of the tumor, consisting of ureter, artery and vein, was ligated *en masse* with a silk cord, the kidney cut off, the abdominal incision closed with sutures and dressed. The patient was put to bed, and after half an hour came out from under the influence of the anæsthetic and inquired

of the nurse about the particulars of the operation. She gave no evidence of pain or suffering, and assumed her usual air of indifference to her surroundings which, according to the statement of her niece, was her peculiarity. Three hours after the operation the bladder was catheterized, but no urine obtained. Catheterization was repeated at intervals of six hours during the two succeeding days with a like result. The temperature at 8 o'clock P. M., six hours after the operation, was 101° F., falling to 99° on the following morning, gradually rising to 103° toward evening, and falling in the same manner to 100° on the morning of July 28th. She slept for a few hours during the night after the operation, and after a small dose of morphia; took moderate amounts of nourishment and some stimulants. About noon of the third day began to complain of soreness all over the body, became irritable and restless, but continued to take milk and whisky. She passed no urine up to the time of her death, which occurred at 6:20 P. M., fifty-four hours after the operation, caused by suppression of urine. A post-mortem examination was not held.

The removed kidney with the calculi weighed fourteen and a half ounces, and is among the pathological specimens which Dr. Keen presents this evening.

In submitting the case for discussion and criticism of the Society, without explanations in justification of the course which I have pursued, I am adding one to the great number of recorded and unrecorded cases of movable kidney, the removal of which has been attempted or accomplished in the belief that the tumor was ovarion, uterine, splenic, or belonging to any of the abdominal or pelvic organs.

ANÆSTHETICS.

The choice of anæsthetics in obstetrical practice has proven less difficult than in surgery, chiefly, no doubt, on account of the lack of opportunity to experiment upon the parturient woman.

EYE, EAR AND THROAT.

DISTINCT AND
INDISTINCT
VISION.

BY

JAMES JURIN,

LONDON.

An appendix to "a compleat
system of opticks,

BY ROBERT SMITH, L. L. D.

Professor of Astronomy and
Experimental Philosophy,
at Cambridge, and Master
of Mechanics to his
MAJESTY." Cambridge,
1738.Continued from March
Progress, Page 415.

111. The proportion between the sines of incidence and refraction upon passing out of the aqueous humour into the crystalline, we take to be that of 13 to 12, upon passing out of the crystalline into the vitreous humour, that of 12 to 13.

Mr. Hawksbee¹ from an ox's crystalline makes this propor-

tion a little more; Dr. Pemberton² seems to think it a little less, but says his experience was not accurately made.

112. By computing upon these measures and refractions it will be found by Art. 369 of this Book of Opticks, that such an eye will collect parallel rays into a point at the distance AM from the outer surface of the cornea of 8,9993 tenths, that fM is 23,9562 $AL=5,3732$, $IL=2,0559$, and the rectangle $IL \times fM=49,2526$.

113. Hence, if AP , the greatest distance at which the rays of an object can by the eye be collected into a point, be 27 inches, or 270 tenths, MS will by Art. 370 of the Book of Opticks be found equal to 0,1861; and by so much must the *Retina* be situated behind the point M in order to have *Perfect Vision* at the distance of 27 inches; and at all greater distances than 27 inches the pencils cannot be collected into single points, but must each of them occupy a circular space upon the *Retina*.

114. Let us now examine what space the image of a lucid point supposed at an infinite distance, as a fixed star, will upon this supposition occupy upon the *Retina*, and what angle the star must appear to subtend.

By Art. 368 of the Book of Opticks, when

$$AB \times MX$$

PL is infinite, $Xx = \frac{Z}{Z}$ and by Art.

380 of the same Book, $\frac{Pp}{Pl} = \frac{Xx}{V} \times \frac{nM}{nX}$

Therefore, supposing this Xx equal to the

other Xx , $\frac{Pp}{Pl} = \frac{AB \times MX}{LV} \times \frac{nM}{nX}$. And by

Art. 388, $Z \times V = LI \times fM$. Hence

$\frac{Pp}{Pl} = \frac{AB \times MX}{LI \times fM} \times \frac{nM}{nX}$. And if we neg-

lect the ratio of $\frac{nM}{nX}$, $\frac{Pp}{Pl}$ is nearly equal to

$$\frac{AB \times MX}{LI \times fM}$$

$$\frac{AB \times MX}{LI \times fM}$$

Now, if a star be considered as a lucid point, and MX be the distance of the *Retina* from the point M , the semidiameter of the image of the star upon the *Retina* will be Xx . And if Pp be the diameter of an object seen at a very great distance Pl , whose image upon the *Retina* is equal to that of the star, it is plain that this object and the star must appear of the same magnitude, and to subtend the same angle. But the half angle which the object subtends at the eye, or

$\frac{Pp}{Pl}$ is measured by $\frac{AB \times MX}{LI \times fM}$: therefore

this quantity is likewise the measure of the half angle under which the star appears. Hence, if AB , or the half aperture of the pupil be one tenth of an inch, which I think by star light must be pretty near the truth, and MX be equal to MS , or by the preceding article, to 0,1861, we shall find the angle

$\frac{Pp}{Pl}$ to be nearly 13'. So that a star must

appear to be about 26' in diameter, or equal to between 8 and 9 digits of the full Moon, which is contrary to experience.

115. Likewise two stars, which are not

1 Physico-Mechanical Experiments.

2 Dissertatio Physica-Medica.

more asunder than 26 minutes, will by Art. 63, appear contiguous, which is also contrary to experience. For *z Bayeri*, or the middle star in the tail of the great Bear is distant from *Alcor* but a little more than 12' and yet the distance between them is easily perceived.

116. Also the distance between the two stars, which compose the double star *a* in the head of *Capricorn*, is little more than six minutes, yet that distance is easily seen by a common eye.

117. But farther, the interval between the two stars in the *Hyades, n Bayeri*, is very conspicuous, and might, as I judge by my own eye, and am informed by several other persons, young and old, be plainly distinguished, if it were less than it is, though it be only 5' 40".

118. From all which it follows, that the eye can distinguish a much less interval between two stars than that of 26', and consequently that the eye can have *Perfect Vision* at a much greater distance than 27 inches.

119. And if we suppose a star to appear under an angle of 6', and consequently that we can but just discern the interval between two stars little more than 6' asunder, it will be found by computation, that the eye is suited to see an object by *Perfect Vision* at no less a distance than 9 feet 7 inches.

120. But if a star appears under an angle of 4', and we can see the interval between two stars little more than 4' asunder, which by the trials I have made, seems generally to be the case in good eyes, it will follow from computation, that the eye in seeing such an interval is accommodated to see an object with *Perfect Vision* at the distance of 14 feet 5 inches.

From what has been delivered in the preceding articles may be drawn a decisive argument against the opinion of Mons. De la Hire mentioned in Art. 105.

If the eye cannot alter its conformation so as to obtain *Perfect Vision* at different

distances, but is confined to some one determinate distance only, and at all other distances vision is more or less indistinct, without any other help than the contraction of the pupil, let us suppose that one determinate, invariable distance for *Perfect Vision* to be 27 inches.

Then by Art. 114, a star must appear under an angle of 26', and by Art. 115, the eye will not be able to perceive an interval between two stars that are 26' asunder, supposing the radius of the aperture of the pupil to be by star-light one-tenth of an inch.

And if we were even to suppose the diameter of the pupil to be by star-light so small as one-tenth of an inch, which I take to be as small a size, as it can be contracted to in most eyes by a moderate day-light, or a strong candle-light, yet still we shall not be able to perceive an interval between two stars that are not more than 13' asunder, which by Art. 115, 116, 117, is contrary to experience.

Also by Art. 8 of the *Remarks*, by a moderate day-light, or strong candle-light, a point in this print will at the distance of $13\frac{1}{2}$ inches appear under an angle of 13', that is, as large as a black circle of half a tenth of an inch in diameter seen at that distance by *Perfect Vision*: And the *penumbrae* of two parallel lines in an *n* or *m*, will meet in the middle of the space between them, unless the intervals of those lines be half a tenth of an inch asunder, that is the print of this *Essay*, or of the *Book of Opticks* itself, will not be at all legible at the distance of $13\frac{1}{2}$ inches, which is also contrary to experience.

And if, instead of 27 inches a larger distance be pitched upon for the invariable distance of *Perfect Vision*, this will a little help the matter with regard to the intervals of the stars; but will increase the confusion at the distance we usually read at. If a smaller distance be pitched upon, we shall read more easily at our usual distance; but shall not see the interval between

two stars, unless they are more than 13' asunder.

III.

121. We come now to the third point proposed in Art. 104, namely, What is that change, which is made in the conformation of the eye, in order to obtain *Perfect Vision* at different distances.

Concerning this point anatomists and opticians are divided into many opinions, such of which as I can recollect either from reading or conversation, I shall here propose, and shall briefly examine.

122. One sentiment is, that the eye in a state of inaction, when both itself and the parts about it are in perfect rest, is accommodated to see with perfect distinctness at the greatest distance: And that in order to view nearer objects, the globe of the eye is compressed by its muscles into an oblong figure, so as to render the axis so much longer as is necessary to unite the pencils into points upon the *retina*.

But to this opinion it may reasonably be objected, that in many animals the *sclerotica* is so hard, as not to be capable of changing its figure by this pressure. And that even in men and other animals, where the *sclerotica* is less hard, yet this pressure of the muscles can never be so equal as to affect the fibres of the *retina* alike in all parts, but that its fibres must in some places be crowded closer together, or more pressed inwards, than in others, which must needs disturb the vision. To which we may add, that no slight pressure will be sufficient, for the effect proposed. In order to render vision perfectly distinct at all distances from 6 inches to 14 feet 5 inches, it must be such a pressure as will lengthen the axis of the eye one-tenth part, and to do this the *retina* must be reduced from its spherical figure to such an oval, as very much to disorder the range of its fibres.

123. A second opinion is, that the eye, when at rest, is fitted for seeing the nearest objects distinctly; and that in order to distinct vision of remote objects, it is pressed

against the back of the orbit, so as to render it flatter and its axis shorter.

But against this *hypothesis* all the same objections, as we have urged against the former, may justly be made.

124. A third opinion is, that the eye, when at rest, is suited to the most distant objects, and that in order to see the nearer ones distinctly, the crystalline humour is by means of the *ligamentum ciliare* drawn forwards, so as to increase the distance between its back surface and the *Retina* sufficiently to unite the pencils into points upon that membrane.

But to see objects with *Perfect Vision* from 14 feet 5 inches to 6 inches, it would be necessary that the crystalline should be drawn forwards by about 0,87, which the *uvea* will not permit, there being no more than the distance of 0,22 at the most between the *uvea* and the crystalline.

125. A fourth *hypothesis* is, that the eye, in a state of rest, is accommodated to the nearest objects, and that in order to see distinctly the more distant ones, *ligamentum ciliare* contracts, and thereby draws out the crystalline into a less convexity.

But to see objects perfectly distinct from 6 inches to 14 feet 5 inches, the alteration in the convexity of the crystalline must be very great. For the radius of each of its surfaces must increase more than $\frac{2}{3}$ of what they are at present. But the crystalline is of too firm a texture, and the *ligamentum ciliare* seems much too weak, for so great an effect to be expected.

126. A fifth opinion has been advanced by the learned and ingenious Dr.³ Pemberton, that in order to suit the eye to the nearest objects, one surface of the crystalline is to be rendered more convex, while the other grows flatter. And that, to suit the eye to the more distant objects, one surface of the crystalline is rendered flatter, while the other becomes more convex.

³ Dissert. Physico-Medica.

OBSTETRICS AND GYNÆCOLOGY

OBSTETRICAL
SOCIETY OF
PHILADELPHIA.

Reported for PROGRESS

BY

J. M. BALDY,

M. D.,

Secretary.

Stated Meeting Thursday,
April 4, 1889.

The Vice-President,
Dr. W. H. H. Gith-
ens, in the chair.

Dr. G. E. Shoe-
maker described an
improvised waterproof
drainage-pad for op-
erations.

The only point of
the arrangement here
described is that it

may be improvised in any household, even the poorest; and it is not intended that it shall take the place of the excellent device so widely advertised by an instrument maker, except in emergencies. It happens to every one, however, to be called upon to do various minor operations when out of the reach of all formal apparatus, and in a number of cases where it was desirable to use water freely without wetting the bed or the patient, the writer has obtained the greatest comfort and satisfaction by the following means:

The necessary material, which can be had anywhere, consists of a sheet of thin coverlet and a piece of rubber cloth or table oil-cloth.

The sheet is folded twice and then made into a tight roll about three or four feet long to form the rim. This roll, laid near the edge of the bed or table, is bent into the form of the letter O, with a six-inch opening on one side of the O, the ends of the roll at this opening being fastened by safety-pins strongly to the edge of the mattress or the cover on the table.

When the rubber cloth is thrown loosely over this, a basin is formed which is open at the edge of the bed, and fluids readily find their way into a vessel on the floor to which the rubber cloth leads. Even a prolonged perinæum operation, under constant irrigation, may be accomplished without any disarrangement or leakage. The same arrangement will be found to be of great as-

sistance to patients in that troublesome procedure, the daily hot-water douche.

This may, of course, be called only an adaptation of the idea in the advertised pad before referred to. It may also be called a modification of the waterproof sheet which every woman has used on her bed since the deluge. The only object here is to call attention to the fact that we can; any of us, by simply making a curved ridge in this sheet, and paying some regard to the ordinary laws of hydrostatics, make for ourselves a very great convenience, and save our patients and their attendants a good deal of trouble and annoyance.

Dr. W. S. Stewart narrated the removal of a large, adherent, degenerated, parovarian cyst:

A young lady, aged 24 years, was brought to our hospital from New Jersey by her physician for examination and such treatment as should be determined on. I found in the left iliac region a hard mass, which, at first examination, seemed to be solid, but a more careful examination with the finger in Douglas' cul-de-sac, with palpation from above, revealed some fluctuation. On moving the uterus, the mass was found to be adherent to that organ, causing some doubt as to whether or not it was a true ovarian trouble. In consultation with my *confrère*, Dr. Montgomery, it was decided to remove the tumor, as from the history it evidently caused much suffering, with rather increased pain, distress, and irregular menstruation, and was developing more or less rapidly.

Two days later the patient was put on the table, and she almost died from the ether before the operation began. I was kindly assisted by the resident Dr. Hughes, chief of clinic, Dr. West and Dr. Dorman. On reaching the upper portion of the tumor, I found it adherent to the omentum, to the small bowel, to the walls of the abdomen, to the uterus and to every part with which it was approximated. It was also deeply seated in the pelvis. On introducing the trocar, I found that the tumor was filled

with pus. The liquid degenerated, and we had a pent-up septic fluid in an almost aseptic condition. I rapidly removed the disintegrated sac from the parts to which it was attached, working as rapidly as possible, for the patient seemed to be going to die every moment. Not finding any pedicle, I was obliged to dissect the sac off as carefully as possible, and was delayed some time in getting it off. Considerable oozing, but no special bleeding occurred. I found the adhesions to the uterus so firm that it was impossible to separate the sac, and if I had used a knife considerable time would probably have been required in ligating the vessels. I therefore transfixed the side of the uterus with a ligature, and tied both above and below, and clipped off the margin as close as possible without affecting the ligature. Where the sac penetrated deeply into the tissues of the pelvis, I ligated as closely as possible and clipped off the remaining portion of the sac. The pus escaped considerably through the pelvis, and I thoroughly irrigated with pure warm water and stitched up the wound, leaving a drainage-tube in position. The patient was returned to her room with a temperature of 96° , almost moribund. Under the use of restoratives, hot bottles, hot applications, and a hot room, she soon regained her normal temperature, and made a speedy recovery without an untoward symptom. The stitches were removed on the eighth day, and the drainage-tube allowed to remain until the ninth day. The present prospects are that the patient will entirely recover, and is now (third week) going about her room in the hospital.

As bearing on the cause of this trouble, I would say that I have learned that she lived on a farm, and that four years ago she took the part of a man in the harvest-field. Her work was pitching the sheaves from a platform in the barn up into a higher portion of the mow. Not having the strength to use the long-handled fork, she put her elbow down on the affected side, and with

this as a fulcrum, and the other hand as a pry, she threw the sheaves up. In this way, possibly, she injured herself. This is a suggestion worth knowing, as a possible cause for this development. At this time she was wearing corsets, and this would confine everything, so that the pressure of the elbow caused an additional strain or possible contusion.

DISCUSSION.

Dr. M. Price.—

One point that I have noticed in regard to these pus tumors is, that the danger of the operation does not seem to be increased by the fact that they are filled with pus. The patient referred to had probably been in a septic condition at the time of operation, and the moment that the tumor was removed and thorough drainage instituted, her chances probably were as good, if not better, than in a case of simple tumor not in a sloughing condition. I have never seen a tumor filled with pus give any trouble after removal. So far as I know the patients have always done well.

Dr. J. M. Baldy.—I must disagree with Dr. Price. It seems to me that the presence of pus and of a septic condition would considerably increase the risks of operation. In the removal of a cyst in which there had been no septic trouble, and before supuration had taken place, the woman would be in good condition, and probably have suffered from no symptoms, save, perhaps, those of slight enlargement. In a case of that kind the risks would be small. Where a woman becomes septic from whatever cause, the risks are seriously increased.

In regard to the cause suggested, I think that there is no very good basis for assuming that this had any effect. I do not think that the pitching of sheaves and the pressure of the elbow would cause the development of such a tumor. This might have been an incidental exciting cause, but that it was the primary exciting cause we have not sufficient ground for believing. Many women develop tumors without hav-

ing any severe labor of that kind. On the other hand, I have seen women who have performed such labor daily, to the severity of which I can personally testify, and never develop anything like ovarian trouble. The wholesome exercise of working in a field would, in a healthy woman, predispose rather to good health than to disease.

Dr. M. Price.—It is a well-established fact in surgery that a recent injury in a previously healthy individual requiring a surgical operation is more dangerous than where the operation is for an old injury. The chances of the second patient would be a hundred-fold better. I had my limb broken. A healthier boy never lived, and for six weeks it was a struggle for life. A year later I had the limb amputated, and I can testify that I have suffered more from the extraction of a tooth than from that operation. If the limb had been operated on at the time of the injury, I should probably have died. I was not used to suffering. There had been no preparation. I do not pretend to say that the presence of pus gave the patient a better chance, but the suffering prepared her for a surgical procedure which, in her case, would be more successful than it would be in a case of simple tumor with adhesions. In uncomplicated ovarian tumor, the operation is one of the simplest in surgery. The case reported was probably one of intra-ligamentous cyst, or perhaps a twisted pedicle. If the operation had been performed before pus appeared, with these strong, unchanged adhesions, her chances would not have been so great as after sloughing had taken place, and degeneration of the adhesions had begun. There was less hæmorrhage and less shock. The patient had been prepared for what had to be done.

Dr. W. L. Taylor.—I would agree with Dr. Baldy that the removal of a sloughing cyst would cause greater risk to the patient than the removal of a simple ovarian tumor. A patient with a sloughing cyst is necessarily suffering from septic trouble. She is

weak and depressed, and her vital powers are lessened. In an ovarian cyst the vital forces are in a good condition for operation. This is the only point to which I would refer, as I did not hear the paper.

Dr. Stewart.—I think that both Dr. Baldy and Dr. Price may be right. When the septic condition has not reduced the patients to such an extent as to preclude their recovery, they often resist shock and recover rapidly. The shock is less severe than in operation in a patient in vigorous health. I can understand this, and have seen it in some cases.

In my case the patient scarcely survived the operation; but when the effects of the shock had passed off, her recovery did not seem to be influenced whatever.

Dr. J. Hoffmann read the following:—

“Craniotomy for a Case of Hydrocephalus, with a Discussion of the Technique of the Operation, together with a Consideration of the Conditions that demand it.”

At midnight of December 23, 1888, I was called by a midwife to see a woman. She was unable to deliver, after, as I afterwards found out, continual effort for four hours. I found the woman much worn out by her pains, which were ineffectual, though her pulse and condition were, all in all, good. Examination showed a large head, well engaged, lying transverse in the pelvis, the occiput to the left.

I at once put on the Poulet forceps but though they were accurately applied, was unable to rotate the head, the forceps finally slipping. After a great deal of difficulty, I again succeeded in applying them, with like result, slipping on traction. A third effort to apply them was only successful after placing the woman on her side. Traction was, however, no more successful than before. I then desisted from further efforts at delivery, two hours having elapsed, and brought Dr. Joseph Price in consultation. Dr. Price, after a great deal of trouble, succeeded in applying the Tarnier traction forceps, with no better

success, however, than had followed the use of the Poulet instrument. From the constant slipping of his forceps, Dr. Price suspected a hydrocephalic head, and so expressed himself. I, on the contrary, thought otherwise, as the bones while not so firm and resisting as usual did not seem to be sufficiently flaccid to indicate hydrocephalus, at least to me. Events, however, proved the correctness of Dr. Price's suspicion, or rather diagnosis; for there being no heart sounds when the head was perforated, the rush of water left no doubt as to the true condition. The instruments used were those presented to-night, as they already have been before. They consist of a crushing forceps, which, from its pelvic curve, is as readily introduced and applied as the ordinary forceps. The non-fenestrated blades afford the safety of a speculum for perforation, and leave no manipulation necessary after that part of the operation has been performed. All considerations of this subject seem to take for granted that the crushing instrument in all craniotomy procedures must be applied after perforation. This, it seems to me, supplies one of the greatest dangers of the operation, and conduces to an unnecessary fatality. The pre-application of the crushing instrument not only protects the maternal soft parts from the danger of injury by the perforator, but also a more exact adjustment, by a gradually applied force as the head is reduced and its contents evacuated by the perforator. The ease of application of this instrument can be appreciated by any one familiar with the ordinary forceps.

The point of the perforator Dr. Price has intended to be protected by the buckskin finger, and the skull pierced through it. This is, however, not really necessary, as the speculum afforded by the crushing blades, together with that afforded by the introducing finger, makes the leather unnecessary.

The combination of instruments afforded in this craniotomy set seems to leave nothing

further to be desired, even if further destruction of the foetus is necessary than the mere reduction of the head. For the consideration of the conditions which demand this operation, there is at present, perhaps, a greater necessity than the mere statement of its technique with any set of instruments whatever. Many of our recent writers apparently desire to condemn it in all cases whatsoever upon the living foetus without exception. As a type of these may be taken the views of Dr. Busey in the "*American Journal of Obstetrics*," January, 1889. These writers, of which Dr. Busey may be taken as a type, fail to appreciate the fact that we need go back no further than Hodge to find that in cases where the short diameter of the pelvis is two inches or under, the Cæsarian operation is to be preferred, as affording a better prospect for the mother, while having the strong recommendation of affording a good prospect of safety to the child; this, too, before the improved Cæsarian operation was devised. These writers seem too, to fail to appreciate that long ago as the writer referred to, to go no further back, the early performance of the Cæsarian section was specifically stated as justifying strong hopes for "the salvation of both mother and child." It is not the purpose of this paper to discuss the relative merits of the Cæsarian section and craniotomy, nor the comparative values of the mother's and the infant's life. It is not possible to avoid, nevertheless, the observation that those writers who unhesitatingly apply the statistical method at arriving at conclusions relative to these in favor of the first operation, seemingly forget that the dangers of craniotomy almost entirely lie within the limits already admitted into the domain of legitimate Cæsarian section, and that outside of these cases the danger to the mother is almost absolutely nothing, as admitted by Lusk in his late discussion. They seem, too, to consider that craniotomy, to be successful, must be done by the expert, and

that the Cæsarian section is the safer, no matter by whom performed. To this we submit a positive disagreement, though even Mr. Tait has gone so far as to say in effect that the removal of the pregnant uterus is a simple operation. Dr. Busey refers to the "dream of Tyler Smith, as to the abolition of craniotomy from the obstetric practice."

When we consider the papers of Tyler Smith, to which reference is made, we can readily understand how opportune was the plea. The table of cases therein quoted from cases in "British Practice," affording excuse for craniotomy, state twenty-five indications for its performance, among which are, to wit: arm or shoulder presentations, rupture of the uterus, face presentations, bands or cicatrices in the vagina, placenta prævia, rigidity of the perinæum, occipito-posterior presentations, etc. "With such 'indications' as these, there was need of a voice crying in the wilderness."

The point to be here considered is whether the decial of the abuse of any operation necessarily implies that there is never any requirement or justification of such operation. We think not. No one will dispute that where there is danger to the mother in the performance of craniotomy, the conservative operation of Cæsarian section should be performed. On the other hand, where there is no danger to the mother whatever, I consider it questionable whether any obstetrician here present would subject his own wife to the danger of a capital operation in order to save the life of the child. Secondly, in cases where such deformity as hydrocephalus or spina-bifida is discovered, I do not believe that the life of the child should be considered as compared with the mother's in the danger of the Cæsarian section, providing that the pelvic contraction be not so great as to bring craniotomy farther beyond the danger-line than the Cæsarian operation.

The application of the same principle in the case of monsters needs no discussion.

The woman recovered without a bad symptom.

DISCUSSION.

Dr. Stewart:—I would say a word in regard to this case of hydrocephalus. I have had two or three such cases and have had no difficulty in delivering after penetrating the skull and allowing the water to escape. I consider this an ingenious instrument, but I have used the old-fashioned perforator cutting both ways. After introducing the blades and separating them you have a free escape of the liquid. The skull then collapses, and there is no further difficulty. You can deliver them with any forceps. Such has been my experience.

Dr. Daniel Longaker.—I have not used this instrument of Dr. Price, but I can readily see that in a certain class of cases, *e.g.*, hydrocephalus, it would be excellent. I desire, however, to say, that in craniotomy, and especially in cases of marked deformity of the pelvis, I have used with the most marked satisfaction the cranioclast of Braun, and the perforator of Blot. I do not see how in ordinarily careful and skilful hands any injury can be done with this perforator. The trepan is certainly a safe instrument.

Dr. J. Price.—I have discussed this matter on several occasions, but the remarks of Dr. Longaker invite me to say something. The application of the instruments mentioned is difficult. When closed they occupy one inch of pelvic space. Much damage is often done, and the mortality in craniotomy has been largely due to injury of the maternal soft parts by this instrument. In one case the sacrum was trephined with the instrument alluded to. Hodge long ago called attention to the use of the ordinary forceps as a compressor. This instrument is made on the same principle, and the strength is in the handles. You can crush anything with this instrument. Any one who can apply the forceps can apply this instrument in any pelvis where the forceps can be applied. It can

be applied in a pelvis with a diameter of one and a half inches. I have seen it successfully applied by beginners in the case of dead children without doing any mischief. The instrument is used first as a speculum, second for fixation, and third for compression.

Dr. Longaker.—It is only necessary to refer to my own experience with cranioclasia, and to confirm my favorable opinion of the operation. I will refer to a paper which can be found in the "American Journal of Obstetrics," I think, for December, 1884. Cases by the fifties and hundreds are reported without a fatal result. This is a proof of the safety of cranioclasia, which I consider the better operation where there is a high degree of pelvic deformity.

Dr. J. Price presented specimens with remarks—

I desire first to present two fresh specimens. One was very unique, removed day before yesterday,—a case of double pus-tubes and double ovarian abscess, with pus in the cellular tissue. The ovaries were cheesy shells, and they both ruptured in the removal. The pavilions were entirely gone. There was no hesitation on the part of those present in regard to the character of the fluid. It was pus. Much has been said in regard to the character of the fluid from this locality. If such liquid was removed from other parts of the body there would be no question in regard to its character. I open one of these tubes before you, and I trust that you will examine the fluid carefully.

This is a typical case of ovarian cyst, no larger than an egg, with no semblance of the pavilion. This contained fluid; but I do not claim that it was pus. The cyst was strongly adherent, and I had to shell it out.

Here is an enormous ovarian abscess, unquestionably due to gonorrhœa.

You will find that most of these tubes have been cut through, and a stick inserted. Most of them on removal were as large as the uterus. All of the patients were great

sufferers. I am sometimes asked what becomes of the patients who refuse operation. In five of these cases I had urged section from a few months to several years previously.

This specimen is from a woman to whom I urged operation five years ago. It is an enormous dermoid cyst encapsuled by omentum. It looked like a hopeless case, but she made a good recovery.

Here are two small ovarian cysts in which it would have been easy to guess at the diagnosis of extra-uterine pregnancy. Here are typical pus-tubes, and you can bear in mind that the character of the fluid in these cases was that of the tubes before you.

I have here a group of four or five small cysts, the removal of which I consider important. These patients suffered severe pain. These occurred in young women who were able to definitely locate the seat of the pain. One of these small cysts developed in a recently married woman 19 or 20 years of age. She saw me three days ago, three months after operation, and states that she has missed the last two periods.

This small tumor was removed by Dr. Müller, of Germantown. The ovary is healthy, and you see a very pretty parovarian cyst. The woman made a speedy recovery.

I have here two extra-uterine pregnancies. The placenta and clot in one is seen in the tube, and can be removed. This is unquestionably an extra-uterine pregnancy. In the other the placenta is inside. The specimen has been examined by Dr. Piersol and Dr. Meigs, and they state that it is undoubtedly extra-uterine pregnancy. This is a hydrosalpinx of the opposite side of the first case. Here you have a beautiful illustration of the existence of double disease. On one side desquamative salpingitis, hydrosalpinx, and pus-tubes, and on the other side extra-uterine pregnancy. The second case was an example of double tubal pregnancy, and both tubes had ruptured. This woman lived after the uterus had been cur-

retted twice, and iodine had been injected after the second operation. The bleeding continued, and until the abdomen became distended, it was not deemed necessary to do anything further.

I desire to say that four of these operation's followed Emmet's operation for laceration of the cervix. If there exists any tubal disease, this is a dangerous procedure. Some one has remarked that Emmet has gone back on his operation. He has uttered a word of caution because of the mortality in the hands of some of his followers. Many of the cases come back to him. Where there has been tubal disease, many deaths have occurred, and many patients are invalids. I do not condemn the operation: I know it to be valuable in well selected cases, when you can exclude the existence of tubal disease.

DISCUSSION.

Dr. M. Price—

Here again comes up the question of the preparation of the patient by the leakage that has been going on in the pus cases. I have seen at least fifty pus cases in the last two years. Very rarely is it that you can deliver the tube without some leakage and perhaps rupture. These cases have recovered and do better than some simple cases. Our nurses always prefer a pus case where a drainage-tube has been used. Where a patient is poisoned and dying, no one makes any claim that there is any advantage; but where inflammatory changes have been going on for a long time, there is, unquestionably, a preparation. I have never seen but one case of pus in the pelvis die; that case died from starvation from the nurse drinking the milk. These cases recover if the enucleation has been done with care, and irrigation and drainage properly performed.

Dr. Hoffman.—In regard to the gonorrhœal origin of these troubles, I would say that two weeks ago I had a child two weeks old brought to me with sore eyes. I applied nitrate of silver, and gave explicit di-

rections as to treatment. In three days the child lost its sight. I found that the mother had gonorrhœa of the most virulent form. I also found ovarian and tubal trouble very marked on one side. She had been married only a short time and previously had known no trouble. There seems to be a connection between the inflammation of the child's eyes, the gonorrhœal discharge from the vagina of the mother, and the trouble in the pelvis.

Dr. J. M. Baldy.—I do not care to say anything in regard to pus-tubes, because my views have been often expressed. I would again take exception to the view of the preparation of the patient by sepsis. It is true that in many surgical injuries better results are secured where the operation is done some time subsequently, than when it is done at once. This is not because of septic infection. Shock is here a great element. This brings up the old theory that it was better to allow ovarian tumors to reach a large size, in order that the peritoneum might be prepared, etc. We have long since given this up, and we shall quickly have to give up the idea that the patient is prepared for operation by being septicly infected.

Dr. Hoffman has referred to the connection between inflammation of the child's eyes and gonorrhœa in the woman. Individual cases do not go for much. The fact that the child has inflamed eyes does not indicate positively the existence of gonorrhœa. The nurse's hands being contaminated by the septic lochial discharges may infect the child's eyes.

In discussing this matter in the Pathological Society the other night, the president stated that he had seen unquestionable gonorrhœal pus-tubes removed from a single woman. On inquiry, however, he admitted that the woman had had two criminal abortions a short time before. This was probably the cause of the inflammatory trouble, and this is the history of many of these cases. It is a dangerous teaching for our-

selves as a profession, and it is a dangerous teaching to the laity. If we teach the laity that all these cases, or most of them, are of gonorrhœal origin, we shall cause an unlimited degree of marital unhappiness throughout the country, and shall cause irreparable family troubles. We certainly must have better and more scientific ground than mere clinical histories before we can accept this extreme view. Dr. Hoffman, in a recent discussion, cited the statistics of Bernutz and Goupil as a proof of this view. Out of ninety-nine cases, about forty-six were of gonorrhœal origin, and these were in the lowest class of women. Even by these picked statistics, and among this low class, over half were of septic origin, and many of the supposed gonorrhœal ones I would be inclined to dispute. I must adhere to my opinion, that by all odds septic infection is the most common cause.

PRURITUS ANI.

The following is an excellent application in cases of pruritus ani.

R

Hydgr. chl. mit.

Balsam Peru

Carb. acid

Lanolin

M. Ft. ointment.

3i

3iiss

grs. xx

3i

Sig: Apply once or twice daily after sponging with hot water.

M.

OUR CONGRESS.

The spirit of fraternity shown at each succeeding meeting of the American Medical Association begins to show some good results upon the dissenters. At Cincinnati Bartholow appeared with his address on medicine, Sam Gross was a conspicuous figure, Whittaker and Reamy returned to the fold, and many other evidences of increasing strength were apparent. At Newport Wm. Pepper and P. S. Conner will deliver addresses. A large number of those who boasted of their opposition to the code of ethics will come in and the good work of organized effort will overwhelm the mischief-maker.

PATHOLOGY AND HYGIENE.

RECTAL EXAMINATIONS IN LIFE INSURANCE.

BY JOSEPH M. MATHEWS, M. D., LOUISVILLE, KY.

Read to the Kentucky State Medical Society at Richmond, May 9, 1889.

The importance of a thorough examination of all applicants for life insurance can not be over-estimated. So well recognized is this that all companies aim to secure the services of competent physicians as examiners; yet many persons are passed who should

not be. Whether this is incompetency on the part of the examiner, or from gross neglect, we will not stop to argue; be this as it may, certain is it that injustice is done the membership or company each time that an applicant is passed who is below the physical standard. So careful is the State of its citizens' welfare that laws looking to their protection are passed, and each company seeking to do business in any State must conform to these laws or be prohibited from doing business within its borders. In keeping with this, each reputable company seeks to protect those already insured from any imposition, hence a long list of questions looking to the confirmation of good health and a sound family history are asked, and the applicant is required to undergo a rigid physical examination. If he stands the test, he is accepted; if he does not, he is rejected. The reason for rejection is sometimes based upon that which the longevity of the applicant afterwards proves to have been a mistake. As for instance the height of the individual must be in proportion to a certain measurement of the chest and abdomen, or to the weight of the body.

Again, if an applicant shows a family history of tubercular trouble, he is liable to be rejected, or if he has already a lung deposit he is certain not to be recommended, notwithstanding the fact that many persons whose parents, one or both, have died with

phthisis, they themselves have escaped the disease altogether; and it is also well known that phthisical patients have been cured.

I do not cite these instances to condemn the action of the companies, but it must be conceded that the applicant must be protected in his rights equally with the company. If he be rejected, either through the incompetency of his medical examiner or through the fault of the company's rulings, he is forever barred from acceptance in other companies.

The responsibility of the medical examiner for life insurance is a very grave one, and, I am inclined to believe, often overlooked. The comfort, happiness, and even the lives of many may rest upon his decision. Each and all of us are more or less interested in this subject, and this forms my excuse for writing this paper. There is a class of trouble to which the barest attention is paid by the life companies, the importance of which every one will admit, a class of diseases which is attended with more serious results than the majority of those mentioned in life policies. I allude to *diseases of the rectum*. With your permission I expect to prove the following propositions:

1st. That there are diseases affecting this portion of the body which are wholly unrecognizable save by a careful exploration of the rectum.

2d. That when syphilis or cancer attack the rectum they are incurable, and are attended with fatal results.

3d. The interim between their incipency and development is so vaguely marked that nothing less than a full exploration will reveal their nature.

4th. That if during this interim the person were to apply for life insurance he would be accepted, other things being equal.

To elucidate my meaning I have taken at random a few cases from my record book:

Case 1. Mr. C., about 45 years old, came to me at the suggestion of his physi-

cian for an examination of his rectum. He remarked that his doctor was not sure that he had rectal disease; nor was he. Yet because of the fact that he strained at stool and passed a little blood and mucous he thought it best to be examined. Placing him in the recumbent position in good light I carefully searched the rectum with a speculum, but nothing was found. Removing the instrument I inserted my finger, and asking the patient to strain down I was enabled to explore the gut for six or seven inches. At the end of my finger I detected an indurated spot which seemed to extend upward. Although there was no gland involvement I gave it as my opinion that this man had incipient cancer. He was given treatment by injections and in a few days the symptoms cleared up, no discharge of blood or mucous, no straining at stool. After this he took a long journey of about fifteen hundred miles, and upon his return he called at my office to say that he had entirely recovered. He had a rest from all bad symptoms for several months. During this interim he applied for a life policy of ten thousand dollars and passed the examination and was insured. After awhile his condition grew worse, the tumor could be felt through the abdominal walls in the sigmoid flexure, perforation eventually took place and he died—of cancer.

Case 2. Mollie T., unmarried, about 28 years old, of easy virtue, and gave a history of syphilis, though no evidence of it could be found. Had had several abortions produced upon herself. Having money she never wanted for the comforts of life. She came to be treated for constipation. Upon examining her I detected, about two inches above the external sphincter muscle, a tight fibrous stricture. I advised her to have it divided. She said she would consent to any treatment but this, consequently gradual divulsion was practiced until a No. 8 Wabs bougie could be passed. She then failed to report for a number of months. When I saw her again the stricture was as

tight as when I first saw her. I should mention that after the first dilatation a large mass of faecal accumulation passed, aided by the syringe. After the second course of treatment she again disappeared and I did not see her for months. Meeting her on the street one day she said that she was not doing well and would call soon. I warned her, as I had often done before, that if she did not attend to it she might die in consequence of neglect. She apprehended this, but failed to report, and in a few days thereafter went upon a long journey. A telegram was received on the morning of the third day after her departure saying that she was dead. Her physician wrote me that she had died in consequence of a faecal impaction above the stricture.

Case 3. A gentleman aged 30, consulted me for constipation. His history was very like many who suffer from this trouble. Said he had taken purgatives in all forms until all had lost their effect. I examined his rectum and detected a stricture at the entrance to the sigmoid flexure. He was put under chloroform and the stricture dilated, and by the aid of my hand pushed through the rectum. He passed an immense amount of faeces that night and made a good recovery. During all the time of his complaint he never lost a pound of flesh or refused to eat a meal.

Case 4. Dr. B. asked me to see with him a young married woman, who was strangely affected. Had been constipated for a long time, but was now unable to pass an action. An examination revealed a stricture just above the external sphincter muscle, which would not admit of the passage of a lead pencil. She was anæsthetized and the stricture cut. She recovered rapidly.

Case 5. A young man, aged 25, was brought to me by Dr. G., suffering with the following symptoms: disposition to frequent actions and passing some mucous and blood at each stool. With the finger, I detected nodules, 4 or 5 inches up the gut;

to high for excision. I diagnosed cancer. Under injections all bad symptoms disappeared. For months thereafter he appeared in good health, not losing a pound of flesh, and eating and sleeping well. After awhile his symptoms reappeared, deposits gradually extended, strictures formed, glandular involvement, loss of flesh, bad color, etc., and the man is now dying at his home of cancer.

Case 6. A lady, married, mother of six children, aunt of the last patient, apparently in good health, came to consult me for piles and constipation. Said she had been advised a good while before to consult me, and was prejudiced against me for the reason that I had treated her nephew so long without benefit. An examination showed two strictures, 2 and 3 inches above the muscle, of small calibre. These were divided, but I gave a bad prognosis, because I believed them the result of either syphilis or cancer. She has gradually grown worse; strictures have reappeared. She has lost flesh, and it is only a question of time and that very short, when she will die from this trouble.

Case 7. Mrs. P., the wife of a doctor, accompanied by her brother-in-law, who was also a doctor, came to me for some "trivial" rectal trouble. I found a scirrhus cancer blocking the entire rectum. She died in about 8 months. These cases will suffice to illustrate my points.

SUMMARY.

The first case verifies all four of the propositions laid down in this paper. 1. The disease could not have been recognized save by a thorough exploration of the rectum. 2. It proved to be both serious and fatal. 3. In the interim between its incipency and full development he applied for and secured a life policy and the company suffered a loss of thousands of dollars.

Case 2. Substantiates the proposition as well, except no application for life insurance was made. It might be said that in this

case a history of syphilis was given and for this the person would have been rejected. In answer I would say, that in many cases of syphilis the only local manifestations are found in the rectum only, hence might escape the attention of the examiner. The fact that a person has once had a local sore is not *prima facie* evidence of syphilis.

Again, it is not necessary that stricture of the rectum should have resulted from either, cancer or syphilis, as is evidenced in cases 3 and 4, where the cause was benign. Cases 5 and 6 demonstrate that malignant trouble may exist in the rectum and give but little intimation of its existence. During the time of latency, if the person so effected should apply for life insurance, the chances are that he would be accepted. In each and every instance, I believe that a careful rectal exploration would reveal the true nature of the disease, and its detection would save the company the amount of the policy. No life company, to my knowledge, requires a rectal exploration and by their neglect to do so, I am convinced by an actual experience that they lose thousands of dollars annually.

HEREDITY.

Many persons born of dissipated parents are supposed to have inherited a sort of neurotic diathesis, which leads them to suffer with headaches, dyspepsia, melancholia, and finally insanity. When a closer study of the character of educational training, begun at the very hour of birth, and continued to adolescence, would show that imperfect development has resulted from irregular, improper, and often insufficient feeding. Disturbed sleep, so potent for mischief in adults, is not thought of by those who jolt, and rock, and toss the poor infant trying to sleep. The baby, with constipated bowels and dry skin, is simply put to the breast whenever it cries out. If, from all this, and much more, the child grows to be a miserable neurotic creature, it is said to be the subject of hereditary disease.

MALIGNANT PAPILLARY CYST OF THE MAMMARY GLAND.

BY

GEO. E. SHOEMAKER,

M. D.,

Reported to the Philadelphia County Medical Society, April 24, 1889.

The growth here presented was removed by Dr. E. L. Duer, from a patient at the Home for Incurables, and is presented here because of its unusual character. It began as a painless lump in the right mammary gland probably two years

ago, though the patient has noticed it but for one year. She is fifty-six years of age, is well nourished and in good health, though blind. There was slow growth and little pain until within the last four months, during which time there has been considerable increase in size, and the pain, at times severe, has been irregular and shooting in character. At the time of operation the overlying skin was not discolored and was not adherent. Both nipples were small and retreated, but there was less protrusion on the diseased side. The gland was heavy, tense, and stood off prominently from the chest. Fluctuation was not recognizable, owing to the deep seated location of fluid.

Below the skin were veins distended and contorted like varicose veins of the leg; but the enlargement of superficial capillaries and the infiltration of the skin itself by the small, thin-walled, purplish-red veins so often seen in malignant tumors, was not present.

The axilla seemed not to be involved and was not opened, but several foci of infiltration in the surrounding fatty tissue were cut away. The general appearance of the growth was such as to suggest sarcoma, or a cystoma, though, as stated, fluctuation could not be made out.

On incision several ounces of thin, dark, dirty-brown fluid escaped, which probably contained much degenerated blood, because under the microscope the dark-brown staining of the papillary growths presently to be described, was found to be due to blood.

There was no well-defined smooth cyst wall, but the irregular cavity was lined by prominent branching papillary growths, either projecting into the main cavity, or separated from it in groups by walls so as to form minor cysts of the size of a cherry. These brown papillomata sprang by constricted peduncles from a somewhat hardened base. This base, or what might be called the solid portion of the tumor, was found on section to be composed entirely of whitish fibrous lamellæ branching one from another, so that a piece removed for examination could not be prevented from separating into layers in handling. Virchow describes the structure of the cystic sarcoma as like that of a cabbage head, an illustration closely applicable to this tissue.

Sections for the microscope were made by Dr. J. P. C. Griffith from typical portions of the tumor, namely, from the papillary growths cut from summit to base, and from the more solid or lamellar portions. Neither showed typical sarcomatous or other form of malignant structure; in fact a microscopical diagnosis was not made, though the examination was carefully conducted.

All sections examined were composed of various kinds of fibrous tissue, some quite dense, much of it embryonic. Some of this had taken on well-marked hyaline degeneration, and exhibited brownish-yellow foci of decomposed blood. In other portions appeared hyaline ground substance dotted with numerous nuclei; in still others finely fibrillated quite young connective tissue, with very numerous connective tissue corpuscles. No epithelial cells were found, nor were there any nests. The blood-vessels, which were numerous, had well-developed, indeed, thickened walls; a condition not found in typical sarcoma. Though to the naked eye, then, the growth corresponds closely with descriptions of cystic sarcoma, as given by various authors, the microscopical diagnosis has so far failed. The occurrence of cysts and vegetations in tumors is not characteristic of any one

variety, since they occur, as stated by Cornil and Ranvier,¹ in fibromata, myxomata, sarcomata, and carcinomata.

That the growth here considered is a cystic fibroma is not likely from the history, including pain and short duration; but whatever its exact nature, its malignancy, in the opinion of the reporter, is extremely probable; this opinion being based upon the general structure, the rather rapid growth, the presence of enlarged veins and the occurrence of severe shooting pain.

DISCUSSION.

The President: It was my good fortune to be present at the operation. The appearance presented was wholly different from anything that I have ever seen before. There was one large cyst about half the size of the fist, and into this projected a large number of rather club-shaped papillomata (?) half the size of the little finger, which were dark in color at their free extremities. The interior of the large cyst was filled with a number of small cysts which looked precisely as if they contained gelatinous material. After the breast was removed I made a section of it. I then cut through two or three of these cysts. The thin wall at once retracted. I presume that the dark color of the fluid that escaped from the cavity was due to the rupture of the walls of these minor cysts and the escape of a certain amount of blood into the cavity. There was not a drop of gelatinous material in these smaller cysts. The whole cyst was filled by these papillomatous growths and secondary cysts.

Dr. John B. Deaver: I think that this growth is most likely a cystic sarcoma—what is known as Brodie's tumor. I have seen several cases which answered to the description that has been given. I recall a case seen a year ago, where the attending physician insisted on tapping. I considered the tumor malignant and a proper one for operation.

¹ Pathological Histology, p. 714.

CHYLURIA.

BY

SOLOMON SOLIS-COHEN,

M. D.

Read to the Philadelphia
County Medical Society,
April 24, 1889.

This patient and these specimens are exhibited at this time to give members an opportunity to see what is a rarity in this climate, and to make a record of the case.

I trust to be able to present a more elaborate study of the condition at some future meeting.

The first specimen of urine exhibited was passed four days ago and shows the characteristics of chylous urine to a marked degree. It looks like so much milk. The second specimen, passed two days ago, is not so marked; and the third specimen, passed this morning, is perfectly clear.

The patient is a colored boy, sixteen years of age, who was brought to Philadelphia from the island of St. Thomas nine years ago. I can obtain from his grandmother, who is an intelligent woman, no history of disease prior to four years ago, at this season of the year; when she noticed for the first time that he passed white urine. He was given a prescription by a physician and in two weeks the urine resumed its normal appearance. There was no further trouble until about April 8th, of the present year, when he again began to pass this milky urine. A week ago he applied at the medical department of the Philadelphia Polyclinic. After obtaining the history narrated, and having the patient urinate in my presence, a prescription was given which, to the mind of the patient, has exhibited startling virtues. It consisted of six drops, thrice daily, of *aqua menthœ piperitæ*. The urine has become perfectly clear, as shown in this morning's specimen.

I have failed to discover in the urine either embryos or ova of the *filaria sanguinis hominis*. It has been kindly examined at my request by Professor Angelo Heilprin and Professor Joseph Leidy; but neither has found evidence of this parasite. I have also failed to discover it in the blood

either by day or night. The blood has also been examined (on one occasion, two nights ago, in this hall) by Dr. Griffith and Dr. Tyson with the same negative result.

Now as to what we do find. The urine is acid in reaction and has a specific gravity of 1.015. On agitation with ether this milky appearance gives place to a slight cloudiness, showing it to be largely due to fat. On chemical examination of the urine after the removal of the fatty matter, a notable quantity of albumin is found, but no sugar. A promised accurate chemical analysis has been prevented by the activity of our therapeutics—or the perversity of the disease.

Under the microscope the milkiness, as stated in the report of Dr. Leidy, "appears to be due to an exceedingly fine and scarcely perceptible molecular basis, as well as to the presence of lymph corpuscles."

On three occasions I have found fragments of finely granular tube casts, and twice a few red blood-corpuscles. After solution in ether, the presence of oil globules is very plainly shown. Bacteria of various kinds were numerous in all specimens examined, even the one freshly passed. No unusual form was cognized as such. The long, slender rod described by Sir William Roberts was invariably present.

When first noticed, the urine all day long presented more or less the chylous appearance. That passed before me at about twelve o'clock, noon, a week ago, was of about the color that would be produced by mixing these two specimens; one clear, one chylous. Later, the milkiness was present only in the morning urine, and now it is not present, even in the morning. The clear specimen of urine shows neither oil, corpuscles, albumin nor sugar.

The boy, although not fatty or fleshy, and probably much under weight, is not wasted. He is active, extremely intelligent, and possesses much physical endurance. Heart and breath sounds are normal. No disturbance in any other function has been observed and no lesion of any kind has been detected.

BOOKS AND PERIODICALS.

THE NORTH
AMERICAN
PRACTITIONER.

BAYARD HOLMES, M. D.,
Editor,
JUNIUS C. HOAG, M. D.,
Associate Editor.

*The Journal of the Post
Medical Graduate School
of Chicago.*

Issued monthly at \$1.00 per
year in advance, by Chas.
Truax & Co., 75 & 77 Wa-
bash Ave., Chicago.

The first issue ap-
peared in March, con-
taining a good variety
of original matter. The
succeeding issues have
maintained the char-
acter of their prede-
cessor, in a literary
sense. Since it is fash-
ionable for medical
schools to establish
journals, it must be
admitted that the Post
Graduate School is in

no sense behind its elder brothers of the
East. The editors of this new candidate
for public favor are both men of literary and
scientific attainments far above the average.
They are experienced writers and possess
undoubtedly a reasonable share of the divine
afflatus. "Westward the course of empire
takes its way" and at the "windy city" knowl-
edge governs the scepter's sway.

WOOD'S
MEDICAL AND
SURGICAL
MONOGRAPHS.

VOL. I No. 3. Neurasthe-
nia and its Treatment, by
Ziemssen; Antipyretics,
etc., by Ziemssen; The
Tongue as an Indication
of Disease, by Dickinson;
Treatment of Cystic
Goitre, by Hovell; New
Remedies from 1878 to
1888, by Cauquil; Index
for Vol. I. Published
monthly at \$10 a year;
single number, \$1.
Wm. Wood & Co., New
York, 56 and 58 Lafayette
Place.

In the first chapter
of this work a fair
sample of the vigor-
ous style of Ziemssen,
and a good illustration
of the German method
of teaching may be
found. Neurasthenia
is described as the
pathological signature
of the intellectual era
in which we live.
After a sort of half
hope and fear fashion

the treatment is outlined. It would not be
fair to say it is described. The author very
reluctantly prescribes, but when he does
yield to the temptation he exhibits the med-
icine in Teutonic doses.

The second chapter opens with the state-

ment that "the advance in our knowledge
of the causal factors of disease, for which
we are indebted to bacteriological investi-
gations, necessarily have altered our opin-
ions in many respects, and have opened up
new routes to our therapeusis." Notwith-
standing this announcement the author still
favors antipyresis, and expresses a prefer-
ence of antipyretics.

It may be truly said calomel was formerly
used to unlock the hepatic portals, in fevers.
Now it is used to kill the micro-phytes in
the alimentary tube. Cold water was used
by Brande to reduce the consuming heat of
the body, by abstraction. Now Ziemssen
uses it to suddly check the growth, or chill
to death the invading army of bacilli. The
change of opinion, and the newly opened
routes of therapeusis are to be found, in
fact, so many new aetiological recognitions,
and so many new theories of the modus
operandi of the same old therapeutical prin-
ciples, with an occasional introduction of a
new agent to meet an old time indication.
It is a sort of substitution of the plow for the
old hoe.

Dr. W. Howship Dickinson discusses the
the tongue as an indication of disease in a
much more scientific manner than did
Mr. Lionel Beal in his slight ailments. Dickin-
son presents his subject in the form of lect-
ures delivered at Saint George's Hospital,
beginning with a historical account of the
recognition the tongue has received in the
study of disease by all the chief writers on
clinical medicine from Hippocrates to Dick-
inson. He axamines the anatomical and
histological features prior to a fresh appeal
to nature to yield up her mysterious influ-
ences over the surface of the tongue, and
concludes the state of the nervous system,
and of the digestive apparatus are often dis-
covered in the color and appearance of the
superficies lingnalis. Dr. Dickinson as a
Fellow of Caius College at Cambridge, is a
shining ornament, no doubt, but, as a clini-
cal teacher at Saint George's Hospital, he is
tedious and impracticable.

CORRESPONDENCE AND SOCIETIES.

KENTUCKY STATE MEDICAL SOCIETY.

Thirty-fourth Annual Session, held at Richmond, May 8, 9, and 10, 1889.

The society was called to order in the County Court room at 2:30 P. M., by the President, Dr. L. S. McMurtry, of Danville. After prayer by the Rev. Prof.

Logan, Dr. John M. Foster, of Richmond, Chairman of the Committee of Arrangements, announced the purpose of the profession and the people to make the members of the society welcome guests in every home in Richmond. A general reception by the citizens and the profession of Richmond was arranged for the society on Wednesday evening, at the rooms of the Madison Club. On Thursday evening a generous banquet was provided at the Garnet House; meantime an abundant supply of carriages had been provided for the free use of the members during the hours of vacation to drive about the city and neighboring country places. Concluding his report with hearty expressions of welcome on behalf of the profession of Madison county, Dr. Foster retired from the hall amid the ringing plaudits of the assembly.

On motion the reading of the minutes of the previous meeting was dispensed with, printed copies having already been distributed to the members.

The report of the Secretary being called for, Dr. Steele Bailey said:

Mr. President: The combined duties of secretary and treasurer have both fallen to my lot during the past year; the correspondence has been unusually large and serves, I think, to show a gratifying increase of interest in the profession throughout the State. The amount of money coming into my hands and the amount paid out, as per vouchers herewith submitted, shows a balance of \$15.00 now in the treasury.

On motion the report of the Secretary and Treasurer was received and filed.

Dr. T. B. Greenley, of West Point, submitted his report as Librarian, from which it appeared but little of interest had occurred in that department. On motion the report was received and filed.

Dr. J. W. Gilbert, of Lawrenceburg, was called upon to report on the progress of practical medicine. He dealt mainly with the subject of alcoholic hepatitis and nephritis, pointing out the co-existence of these conditions perhaps more frequently than the profession had been inclined to recognize.

Prof. J. A. Ouchterlony, of Louisville, being called upon to discuss Dr. Gilbert's paper, said:

The more we study the subject of the relation of organic disease of the liver and kidneys, the more we are impressed with the fact that there is a great deal more yet to learn. The observations of Dr. Bright led to the designation of certain organic changes of the kidney by his name. We have lived to observe in the brief period of about sixty years, that eight distinct forms of organic kidney disease are now grouped under the general term Bright's disease; and yet, as Dr. Gilbert says, we have not yet learned to estimate properly the relative frequency with which co-existing changes in the liver appear. Eklund has correctly pointed out that diabetes mellitus frequently arises from the over-loading of the portal blood with yeast cells, which bud and grow in the liver and at the same time bring about those disturbances in the renal organs characterized by polyuria and glycosuria. Unfortunately our therapeutical resources in these affections are altogether too meagre to warrant the belief that we are, in a very considerable per centage of cases, able to control the pathological processes described in Dr. Gilbert's paper. It is a fact, however, that certain persons, the progeny of inebriates, inherit a peculiar defect of brain structure, characterized by the absence of that will power known as mental balance, therefore themselves fall an easy prey to

temptations of all sorts, and as the temptation to alcoholic tipping is so frequently presented, these people may be reasonably said to inherit a predisposition to inebriety; and this in turn leading, in the natural course of events, to the development of organic diseases of both the liver and kidneys, it is not unreasonable that we should refer to such cases as of hereditary origin. The whole subject is one so inexhaustably rich in its resources, it would be impossible at this time to discuss it profitably in any of its details. Although we recognize alcohol in all its forms as an agent of great value when properly taken, and also of great evil when improperly taken, we must understand that it is only by the prolonged and excessive use of alcohol, or, more properly speaking, the abuse of alcohol, which leads to organic disease of the liver and kidneys; and we must recognize also that many persons who are confirmed inebriates, helplessly so, escape diseases of the liver and kidney. It is a fact, therefore, that, whilst alcoholic liquors sometimes cause these diseases, they are not the only cause.

Dr. Gilbert concluded the discussion by the remark that alcoholic hepatitis was less frequently observed than alcoholic nephritis on account of the fact that such hydrocarbons as alcohol are eliminated directly by the kidneys.

A report on the progress of public hygiene was read by Dr. J. N. McCormac, of Bowling Green. He pointed out the importance of enforcing the law, as amended by the last Legislature, entitled, "An Act to Prevent Empiricism in the Practice of Medicine in Kentucky." This law provides that all persons offering to practice medicine in the State of Kentucky shall first exhibit as an evidence of their qualifications a diploma from a regularly chartered and lawfully conducted medical college; that the diploma must be registered with the County Clerk in each county where the physician proposes to practice; that the diplomas issued by the medical colleges chartered by

the Legislature of Kentucky, shall, on presentation by the lawful holders thereof, be sufficient evidence of qualification; and that the clerks of each county in the State shall register such diplomas for a fee of fifty cents each. Persons holding diplomas granted by medical colleges outside the State of Kentucky, shall be required to submit them to either one of the medical colleges in the State, to the State Medical Society of Kentucky, or to the Secretary of the State Board of Health, who shall endorse thereon the lawful and sufficiently regular character of the institution issuing such diploma, to entitle it to recognition as a qualification to practice medicine in this State. The four medical colleges had each of them agreed to endorse no foreign diplomas, whilst the State Medical Societies, both regular and homœopathic, had delegated to the State Board of Health their authority to endorse all foreign diplomas, thus placing the whole matter in the hands of the Secretary of the State Board of Health.

Acting in this capacity Dr. McCormac had endorsed more than a thousand foreign diplomas, nearly all of them having been sent to him by express, and so far not a single one of them had been lost. There seemed to be an almost unanimous desire on the part of the regular medical profession in the State, and of the homœopathic profession also, to comply with the law, except in Jefferson county, where some misunderstanding seemed to exist. He was pleased to report, however, that the Louisville Medical Society had appointed a committee to collect a fund and to assist the prosecuting attorney in the collection of evidence, and by the employment of associate counsel to prosecute violators of the law.

Dr. Dudley S. Reynolds being called upon to discuss the subject of the report, said, he wished simply to move that the President of the Kentucky State Medical Society appoint a committee in each county to assist the prosecuting attorney to enforce the law regulating the practice of medicine

in Kentucky, and that all surplus funds in the hands of the treasurer at the close of the present session should be held subject to the order of the Secretary of the State Board of Health, who should distribute the money in each county where it might be needed to assist in the enforcement of the law, Jefferson county alone excepted.

The whole matter was referred to a special committee consisting of Drs. McCormac, Reynolds and Arch Dixon, with instructions to formulate a suitable resolution covering this point, to be presented at the morning session.

A report on Gynecology was presented by Dr. W. H. Wathen, of Louisville.

Dr. A. W. Johnston, of Danville, being called upon to discuss Dr. Wathen's report, said he could not endorse all the statements contained in the report; he felt satisfied he had seen several cases of intra-peritoneal hæmatocele.

Dr. John G. Davis, Chief Surgeon of the L. N. A. & C. Ry. Co., being present, was invited to a seat and requested to participate with us in our deliberations. Dr. Davis expressed his thanks for the honor conferred, and indulged the hope that fraternal relations might be established between the Association of American Railway Surgeons and other legitimately organized bodies of the medical profession. He did not appear in his official capacity to represent a railway company, but as the representative of an organized body of professional gentlemen whose duties called them at all sorts of unseasonable hours to perform the most delicate and difficult surgical operations for the relief of our fellow creatures who were the unfortunate victims of accident. He felt it a matter of some importance that the medical profession everywhere should recognize the necessity for co-operation in attempts to advance the proficiency of the medical service of railway companies. This department of the public service was just beginning to undergo some degree of systematic development. That it might do so in the

most rapid and scientific manner, the railway surgeons of the United States had organized themselves into an association for the discussion of such subjects as properly belong to that branch of the practice; and we must all admit that it has some especially peculiar features. With best wishes for a successful meeting and personal thanks for courtesies extended, Dr. Davis took his seat.

On motion, the society adjourned until 8 P. M.

EVENING SESSION.

The Society was called to order by ex-President W. H. Wathen. The first business was the address of the President, Dr. L. S. McMurtry, of Danville.

ADDRESS OF THE
PRESIDENT, L. S.
MC'MURTRY, M.D.
OF DANVILLE.

"Thirty-eight years have elapsed since a convention of physicians was held in the Senate Chambers of Frankfort, to consider the necessity of organizing a State Medical Society. In effecting a permanent organization, the constitution, which was a model of simplicity and conciseness, declared the purpose of the organization in this language: "First, the cultivation and advancement of medical science and literature by the collection, diffusion, interchange, preservation and general circulation of medical knowledge throughout the State. Second, the establishment and maintenance of union, harmony and good government among its members, thereby promoting the character and usefulness of the profession."

In October 1852, the second annual meeting was held in the circuit court room in Louisville, when the real work of the society was inaugurated. At this meeting the original members were nineteen in number, and included the familiar and memorable names of Breckinridge, Chipley, Dudley, Flint, Foree, Gross, Miller, Letcher, Richardson, Sutton, Sneed and Spillman. Forty-six physicians were added to the member.

ship at this meeting, among others the names of Bell, Caldwell, Ewing, Hewitt, L. P. Vandell, Lewis Rogers, Powell, Bartlett, Wible, Peter, C. J. Walton and Bullitt are found—names familiar to Kentucky people and to students of medical science.

At this meeting Professor Henry Miller made a report of the Progress of Obstetrics, a duty for which his original work and superior knowledge eminently fitted him; and Professor Gross read his famous report on Kentucky Surgery. Dr. W. S. Chipley contributed a report on Vital Statistics in which he gave an exhaustive report of the sanitary condition of the State, illustrated by a valuable map prepared under his direction, the result of a sanitary survey of the State. The counties are arranged in colors with reference to their mortality and the prevalence of disease. Dr. C. H. Spillman, of Harrodsburg, who is still among us, respected and honored, made an elaborate report on the Indigenous Botany of Kentucky. The first volume of Transactions was indeed a valuable contribution to medical science and literature. The work done at this meeting demonstrated two important facts: first, that an organization for promoting the science of medicine and improving the sanitary condition of our people was needed. Second, that the profession in Kentucky was thoroughly imbued with the scientific spirit, and in ability, culture and attainments conspicuously in advance of the age.

Briefly and imperfectly I have sketched the origin and foundation of the society which has assembled here this evening in the thirty-fourth annual session. At the time to which I have referred—1851—there were 982,405 inhabitants in the State of Kentucky, and 1,470 physicians. In Lexington, afterward removed to Louisville, a center of medical education had already been established, drawing to its instructions large numbers of pupils from the great domain West and South of the Alleghanies. The fame of McDowell, Dudley, Drake, Caldwell, Gross and their colleagues had al-

ready extended far and near. These were the surroundings and fields in which our predecessors labored. And now that thirty-eight years have elapsed, with regular annual meetings, save during the four years of civil war, may we not pertinently inquire, what has been accomplished? How can we of the present best discharge the duty committed to us by our predecessors? What of the future? These are questions which well deserve our thoughtful consideration.

As has already been stated, the original constitution declares the chief and first purpose of this organization to be "the cultivation and advancement of medical science and literature by the collection, diffusion, interchange, preservation and general circulation of medical knowledge throughout the State." The earnestness of this purpose was attested in 1852 by the historic papers already mentioned, which may be found in the first volume of our Transactions. The time at my command will not permit even an enumeration of the many important contributions to medical science and literature made through the medium of the society and published in the Transactions through all the years. Elaborate researches and clinical studies bearing upon the various departments of pathology, surgery and midwifery constitute the major portion of the Transactions. Through the several standing and special committees all the great advances in medical science and every improvement in the art of medicine and surgery have been quickly brought to the attention of the society. Papers bearing upon improvements in medical education have found a place almost every year, and questions relating to sanitary science have been a conspicuous feature of our proceedings. By oft-repeated suggestions and indefatigable labor through appropriate committees the act of the General Assembly establishing the State Board of Health was secured. More recently by the exertion of the able and efficient executive officer of the Board of Health, with the active co-operation of

this Society, our legislature was brought to realize the importance of further protecting the public health, and passed a law regulating the practice of medicine in this State.

The custom of holding the annual meetings at various points in the State, observed since the foundation of the society, has of itself promoted the declared purpose of the society by awakening the physician's interest in scientific work and diuissive knowledge. By this means, too, county medical societies have been developed and encouraged.

The second purpose enunciated in the constitution relates to elevating the character of the profession. Through the society's proceedings, from the foundation to the present time, appeals have been made for elevating the standard of professional rectitude, and exposing the evils of charlatanry.

If time and patience permitted, I might enumerate many of the indirect influences exerted by the Society in diffusing knowledge, improving the resources of our art, and advancing the public welfare. The charitable institutions of our State have at all times elicited the interest of the society. Our delegates have annually occupied their places in the national medical association and contributed liberally to its proceedings.

From what I have stated relative to the status of the profession in Kentucky at the time this body was organized it is seen that the standard of Kentucky medicine was conspicuously high. The metropolis of the State has continued to be, and is now, a centre of medical education for the Southwest. The medical periodicals edited and published in Kentucky are numerous and of a high order of scientific merit. To those the members of the Society have been constant contributors. In 1879 it was decided by the Society that its papers and proceedings could be best disseminated through the medical journals of the State, and the annual volume of Transactions was discontinued. The last volume published by the

Society was the McDowell memorial volume, containing the oration of Prof. Goss and other papers incident to the dedication of the McDowell monument, which was erected by this Society in Danville in 1879.

An examination of the series of volumes entitled the Transactions of the Kentucky State Medical Society, enables one to trace the progress of medicine through these years of intense activity in every department of our art. As knowledge grew apace, and concentration of energy with the necessary division of labor obtained, specialists in medical practice were developed. These gentlemen, representing the various specialities, have been for years past among the active and valued contributors to the work of the annual sessions. At the same time the great body of the society is composed of general practitioners, whose studies and observations in general medicine and surgery compose the greater portion of our proceedings and are equally instructive and valuable. Indeed here, as elsewhere in our profession, many of the most important and original contributions to medical science have emanated from the practical country doctor. So it obtains that the specialist brings here the results of expert training and concentrated labor to enrich the knowledge of the general practitioner, while the general practitioner strengthens and enlarges the specialist's knowledge in those lines wherein his work began and with which his special work is of necessity closely related.

In thus glancing hastily back over the thirty-three annual meetings of the Society, it is not my purpose to present an optimistic view of our Society's labors and their results. Perfection is not attainable in human institutions and human efforts. There are many features of our annual meetings which could be improved. Each year witnesses improvement in some part of our exercises. This is probably most notable of late in the large number of papers presented at the meetings, in the discussions

arranged beforehand by the Secretary, and the improved arrangements for reporting and publishing the papers and discussions.

It would also be unfaithful to the record to depict our Society's history as a smooth career of harmonious discussion and unanimity of sentiment, opinion and desire. Numerous breezes and some storms have swept across our floor, but these are necessary to progress, and doubtless purify the atmosphere and encourage wholesome growth.

Our organization has not been without its critics and reformers. The occasional attendant, who seldom, if ever, contributes a paper or participates in the discussions, expresses his disapproval of those most active in the Society's proceedings, claiming that they monopolize the time of the Society; forgetting apparently that the attention to the Society can be readily had by himself whenever he chooses, unmindful apparently that the most active members are those who make the Society what it is, and extend its usefulness. The reformer often appears upon the floor with resolutions to amend the rules and mode of organization of the Society, only to show oftentimes that he has not carefully read our constitution and by-laws. From time to time a momentary enthusiasm appears in the form of a proposition to organize a State society upon some ideal basis, forgetting that such institutions are built up through years of steadfast labor, and can not be created in full vigor in a night, and overlooking the important fact that any suggestions looking to improved efficiency are sure of respectful attention upon this floor. The most certain and the speediest way to improve the efficiency of the society is to attend the annual meetings and take part in the discussions.

If in 1851, in our sparsely settled State our predecessors realized the necessity of an organization for the cultivation of medical science surely the obligation to cherish and improve the efficiency of that organization is now increased. The population of

Kentucky has almost been doubled, the number of physicians greatly increased, and the science and practice of medicine and surgery advanced to a degree of perfection beyond the most sanguine expectations of the past generation. In all departments of our art is to be seen the greatest activity, and never before in the history of medicine was there such a demand upon the physician's powers to keep abreast in the line of advance.

A public address on "The Relation of Medicine to Other Sciences," by Prof. John A. Ouchterlony, M. D., of Louisville.

Dr. E. M. Duncan, Chairman of the Committee on Necrology, made the following report:

JOHN LEWIS PRICE, M. D., was born at Nicholasville, Ky., April 20, 1835, and received his early education at the high school in Mt. Sterling, going thence to Independence, Mo., to begin the study of medicine under the guidance of Dr. Jno. L. Price, of that place.

His first course of lectures was taken at the old McDowell College in St. Louis, which was a famous institute in its day, and in 1860 he graduated from the medical department of the University of Louisville.

Going at once to Mercer county, he began the practice of his profession with an earnestness and devotion that at once insured success. From Mercer he removed to Clark county, and from Clark county to the city of Lexington, where he soon took rank with the foremost in his profession.

With the highest convictions of duty, a genial and kindly nature, full of charitable impulses, he was at once a useful citizen and a public benefactor, and in his death, which occurred at Lexington, Ky., from phthisis pulmonum, Saturday morning, January 5, 1889, the public and his profession sustained a serious loss, and this Society now mourns the loss of a loved, intelligent and honored member.

Besides being a member of this Society, Dr. Price was also, at the time of his death,

a member of the Mercer County Medical Society, the Central Kentucky Medical Association and the American Medical Association.

SECOND DAY.

Thursday morning, May 9, the society was called to order at 9 o'clock by the President, Dr. L. S. McMurtry. A report on the Progress of Surgery, by Dr. W. L. Rodman, of Louisville, was presented as the first business in order.

At the conclusion of Dr. Rodman's paper, the President announced that, inasmuch as there were other papers of a kindred nature to be presented for discussion, they would be heard at this time, and called upon Dr. David Barrow, of Lexington, for a report of his experience in laparotomy for penetrating wounds of the abdomen. The first case was that of a gunshot wound which entered below the umbilicus. Laparotomy was done three and a half hours after the occurrence of the injury. The operation lasted two hours, owing to the great number of perforations of the intestinal tube. The patient rallied and seemed to promise well, but soon became restless and died of acute peritonitis.

The second case reported was that of a strong, muscular man. This patient was found to have suffered extensively from intestinal perforations, and although the operation seemed to prolong life, he finally perished. Two other cases were reported in which recovery followed, one in which Senn's hydrogen gas test was relied upon to establish penetration. Dr. Barrow concluded with the statement that he felt satisfied laparotomy should be performed in cases of gunshot wounds as early as possible, if it be decided upon at all. The great difficulty was that most of them were practically moribund from hemorrhage or from peritonitis, before the operation was performed.

Prof. J. A. Larrabee, said he did not desire to offer any criticism upon the excel-

lent report in its surgical bearing. He had given up all pretenses to surgery as a specialty, years ago, and had no desire to cultivate anew that branch of practice. He thought that possibly a few of the therapeutic points in the paper might be discussed with profit; and first, if he had understood Dr. Rodman correctly, that the danger from chloroform anæsthesia was in proportion to the amount of the agent circulating in the blood at any given time—(Dr. R.—That is the way I stated it)—then he thought there must be an error somewhere. This certainly did not correspond with his experience. He had fortunately been spared an accident in his own cases, but had witnessed several in the hands of others, and also the cases coming under his care and observation a quarter of a century ago in the U. S. army.

In all these, when accident occurred, either sudden death or threatening danger, it was with the first few whiffs of the chloroform—before any appreciable quantity had been drawn into the lungs, and before even the commencement of anæsthesia. Certainly the blood could contain little if any chloroform at this stage. He believed that it was a pretty general rule, at least he used to feel very comfortable to continue the chloroform *ad libitum* in prolonged operations after the narcosis had once been safely established, and then with careful watching is often continued for hours, even as cases of valvular disease of the heart. Some other explanation of chloroform deaths, therefore, should be made. He thought it lay between spasm of the glottis and the overwhelming of the cardiac accelerator centers, in the first place. He believed there was still a want of knowledge as to the proper mode of administering anæsthetics.

The doctor accustomed to give chloroform properly and safely will make a poor anæsthetizer with ether, and conversely, for the reason that these agents are directly opposite. As regards the mode of producing anæsthesia with ether there is always tetanus,

and it is dependent upon the stimulation of the medulla by the increased circulation that must be forced and hastened, hence the proper way to give ether is to pour on all that is required at one time. Saturate the towel under the cone and allow no air, placing the cone well down upon the face, a proceeding which would be almost unavoidably fatal with chloroform, which should be given largely diluted with atmospheric air. He believed that the danger from chloroform anæsthesia would be reduced to nil, if surgeons would make it an invariable rule to give a suitable hypodermatic injection of morphine and atropine a few moments before anæthetizing these patients.

Another point of scarcely less importance he thought, was in the commencement of any cutting before the patient was in a stage of complete anæsthesia. This was not likely to occur in capital operations, but is liable to be forgotten by inexperienced surgeons in minor operations, where we have the greatest fatality from chloroform. The additional shock by the surgeon's knife, in a chloroform narcosis, will precipitate a fatality.

The second point that he desired to notice in the report, was the use of iodoform as a surgical dressing. He had noticed in the reports of laparotomies which had terminated fatally, a very remarkable coincidence of symptoms described as preceding death and coming on in twelve or forty-eight hours after operation, such as continued uncontrollable nausea, retching low temperature (subnormal), mental delirium and very rapid thready pulse—these symptoms were classed by the surgeons as continued shock or collapse, while in fact, they are nothing else than pathognomonic symptoms of iodoform toxæmia. He believed the surgeon did not appreciate this as does the therapist. He had beheld with feelings of horror the lavish use of iodoform by surgeons and dressers after laparotomy, and the envelopment of ounces of the poison by improvised dressing and gauze of iodoform, thus compelling the patient to breathe as well as

absorb an atmosphere loaded with one of the deadliest of poisons. There could be no objection to the use of ten or twenty grains of iodoform, nicely distributed over a wounded surface by means of a blower, and this would be sufficient to secure the asepsis; he thought it high time that a caution should be given to hospital dressers and nurses against an agent used by them as though it were entirely innocuous.

In conclusion, Prof. Larrabee paid a high compliment to the report as being one of great practical value, and not merely theoretical.

Dr. Arch Dixon, of Henderson, being called upon to discuss the subject, emphasized the value of Senn's hydrogen gas test.

He called attention to the value of bone plates, the cat gut ring, and plates of cartilage in support of sutures in cases of extensive resection. Where the bladder was injured great difficulties were presented in keeping the organ at rest. In injuries of the prostate, supra-pubic cystotomy often became necessary. In the main, he could endorse Dr. Rodman's remarks on the subject. As to the choice of anæsthetics, Dr. Dixon would like to emphasize the importance of careful examination of the heart, the respiratory organs, and a chemical examination of the urine, where it is contemplated to use ether. He thinks he may fairly assert that a patient in his practice perished from ether when he might have been saved had the urine been examined in time.

Dr. Ap Morgan Vance, of Louisville, said he thought it the duty of every surgeon to take time to examine the urine as well as the heart and lungs before giving anæsthetics. In cases of penetrating shot wounds, Dr. Vance believes in early operations.

Dr. J. N. McCormack, thought too much time was spent in trying to make artistic coaptation, in enterectomy. He has had sufficient experience in the operation to know that approximation of the cut surfaces answers every purpose, whilst firm stitching may prevent primary union.

(TO BE CONTINUED)

PROGRESS

A MEDICAL MAGAZINE ISSUED MONTHLY.
DUDLEY S. REYNOLDS, A. M., M. D., EDITOR.
JOSEPH M. MATHEWS, M. D., ASSOCIATE EDITOR.
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VOL. III. LOUISVILLE. MAY 1889. No. 11.

THE STATE SOCIETY. The Kentucky State Medical Society held its thirty-fourth annual meeting at Richmond, May 8th, 9th, and 10th. It was indeed gratifying to the friends of peace and harmony to witness the presence of the representative talent of the profession of the State. The meeting last year at Crab Orchard, having been disturbed by political dissension, it was predicted by the defeated candidates for office, that the society would never recover, but it seems to have turned out quite the contrary way: the Society not only recovered from this blow, but, by the absence of the political element and the recognition of the triumph of the law and order party last year, on the part of the working members of the profession, a very large and harmonious body assembled at Richmond. The character of the work done, and the extent of it, will stand favorable comparison with any other state medical society in the country. Unfortunately for the readers of PROGRESS, the report contracted for turned out to be a failure. In fact, it is no betrayal of confidence to say, that the Secretary, in order to secure a perfectly reliable report, had an arrangement with a pretended expert stenographer from Cincinnati to report the whole proceedings. PROGRESS was to bear half the expense and to have the privilege of publishing the whole report; the Secretary

of the State Society meant to condense the matter so as to give special prominence to the official minutes of the meeting. In this way it was thought both the interests of the Society and of the medical profession at large, might best be subserved. To show some of the rare features of the report made by this expert stenographer from Cincinnati, the following extract from the remarks of Dr. A. W. Johnston of Danville, in discussing Dr. Wathen's report, may prove interesting: "I do not agree fully in the exact statement with Dr. Wathen, and that is that the foetus would be absorbed prior to the rupture of it, unless it is checked the majority will die. Thus they are liable to be saved by the prompt action in getting in. He takes enlargements. It rarely ever occurs except where you have rupture through the radiax." * * "For some weeks you find the intestines all knotted together and find a large number of clots. It is difficult to tell whether the hæmatocele is in the peritoneam." * * "Extra-peritoneal cases to show the picture which I intend to bring to you will be about this: about say 7 or 8 days after the stages are all out, the patient is entirely comfortable; you think the strain on you will let up; you think the woman is a success; all of the mold really cast outside of the peritoneam . . . they all get left."

MITCHELL DISTRICT MEDICAL SOCIETY. The meeting of the Mitchell District Medical Society has been postponed for one month. The next semi-annual meeting will be held at West Baden Springs, Indiana, July 18 and 19. Dr. J. M. Shields, of Seymour, Chairman of the Committee on Programme, is arranging for a large number of good papers, and it is expected a large number of invited guests will be present. The Springs enjoy a delightful location in the Blue River Hills, and have long been one of the most popular watering places in Indiana.

PUBLISHERS' DEPARTMENT.

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The Publishers' Department of PROGRESS is designed to afford the Business Editor proper space, in the regular order of our system of classification of the text, for such notices and comments as he may feel inclined to make of meritorious articles, and such items of news as may seem to him best calculated to interest the readers.
No house will, therefore, be able to purchase space in this department.

PEACOCK'S BROMIDES.	HYSTERIA.—I have used Peacock's Bromides with fine results and shall continue to use it. One case in particular illustrated its effects. The patient (female) was much troubled with hysteria, and, as usual in such cases, had every imaginable disease. I gave her Peacock's Bromides, and on taking as directed, all hysterical phenomena disappeared. In such cases I consider it the remedy par excellence.—E. F. Conynghame, M. D., Olivia, Minn.
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BROMIDIA AS A HYPNOTIC. BY EDWARD WARREN-BEY, M.D., C.M., L.L.D., <i>Chevalier of the Legion of Honor.</i>	The success which this drug has achieved in France is somewhat remarkable. The French as a nation are wonderfully conservative in everything save their politics adhering tenaciously to the ideas and objects with which they are familiar, and regarding with corresponding suspicion all novelties and innovations, especially those coming from abroad. Hence it is that the materia medica of France has not marched <i>pari passu</i> with that of its neighbors. The bromidia (Battle) at once attracted the attention of the French physicians, and their experience with it so developed their confidence in it as a prompt, reliable and
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harmless hypnotic that, in utter disregard of all that they had been taught and believed respecting the danger and unreliability of alien products, they promptly accorded it a place in their repertoire of remedial agents, and are now using it as freely as any medicinal preparation included in the Codex. In no other country, in fact, does it enjoy a larger measure of popularity than in France, and so great is the demand for it that it has been found necessary to manufacture it in large quantities in an establishment especially arranged and organized for that purpose.

As no extraneous influences have been brought to bear in its favor, it has had to make its own way in the face of opposition and prejudice of the most formidable character, upon the strength alone of its virtues as a remedy for insomnia and other corresponding disturbances of the nervous system, the conclusion is legitimate that it really possesses the therapeutical properties claimed for it, that it is a hypnotic *par excellence*, and without a rival.

To those familiar with the use of bromidia (Battle) no argument like this is necessary, for it speaks for itself by fulfilling the indications for which it is administered with a certainty, efficiency and harmlessness which elicit at once the delight of the prescriber, and give to the profession the assurance of possessing one remedy at least which approximates so near to infallibility of action as to justify the title of *specific*.—*Medical Press and Circular*, London, Eng., March 27, 1889.

THE BEST SADDLE BAGS.	The Mellier Drug Co. not only make the best Orthopædic Apparatus, but also at lower prices than can be found elsewhere. Write them for quotations. All work guaranteed. They also manufacture the celebrated Elliott Saddle Bags, which stand almost without a rival in the market.
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PROGRESS

A Monthly Magazine for Students and Practitioners of Medicine.

"I HOLD EVERY MAN A DEBTOR TO HIS PROFESSION; FROM THE WHICH AS MEN OF COURSE DO SEEK TO RECEIVE COUN-
TENANCE AND PROFIT, SO OUGHT THEY OF DUTY TO ENDEAVOUR THEMSELVES, BY WAY OF AMENDS, TO BE A HELP AND
ORNAMENT THEREUNTO. THIS IS PERFORMED, IN SOME DEGREE, BY THE HONEST AND LIBERAL PRACTICE OF A PROFES-
SION; WHEN MEN SHALL CARRY A RESPECT NOT TO DESCEND INTO ANY COURSE THAT IS CORRUPT AND UNWORTHY THEREOF,
AND PRESERVE THEMSELVES FREE FROM THE ABUSES WHEREWITH THE SAME PROFESSION IS NOTED TO BE INFECTED; BUT
MUCH MORE IS THIS PERFORMED, IF A MAN BE ABLE TO VISIT AND STRENGTHEN THE ROOTS AND FOUNDATION OF THE
SCIENCE ITSELF; THEREBY NOT ONLY GRACING IT IN REPUTATION AND DIGNITY, BUT ALSO AMPLIFYING IT IN PROFESSION
AND SUBSTANCE."—BACON.

VOL. III.

LOUISVILLE, KY., JUNE, 1889.

No. 12.

GENERAL MEDICINE.

DIAGNOSIS AND TREATMENT OF PULMONARY TUBERCULOSIS.

BY

FRANK C. WILSON,

M. D.,

*Professor of Diseases of the
Chest and Clinical Medi-
cine, in the Hospital Col-
lege of Medicine, Louis-
ville.*

Read to the Kentucky State
Medical Society, at Rich-
mond, May 9, 1889.

The importance of an early diagnosis of any disease is self evident. The great fatality of that dread disease, which destroys almost one-tenth of the human race, and the utter futility of all plans of treatment in the later stages, render it imperative that we should not only seek

to discover its earliest manifestations, but also, that condition of the system which predisposes to its development. The earlier the disease can be recognized, the better opportunity we have to cope with it.

Prophylactic measures are not only warranted, but demanded by a knowledge of—first, an inherited predisposition; second, exposure to possible and probable infection, and third, indications which point to the early development of tubercle.

A careful physical examination by a delicately trained ear may succeed in detecting very slight deposits of tubercle once formed, but cannot disclose the conditions, local or general, which precede the actual deposit. The discovery of the bacillus in the mucus from the throat or the sputa, will frequently demonstrate the presence of

tuberculosis long before physical signs can be detected. The importance of careful microscopic examination of the sputa in all cases can not be over-estimated.

Efforts have been made to determine what effect the condition of the system, preceding the deposit of tubercle, may have upon the relative force, length and frequency of inspiration and expiration. For this purpose several instruments have been devised, but no very extended observations have been made.

The pneumatic syren of Dr. Edgar Holden, of Newark, N. J., consisting of a glass cylinder about eight inches in length and one inch in diameter, provided with a perforated disc attached to a light spring, so arranged, that when the air is expired through the tube, the disc is carried along a graduated scale to a distance corresponding to the force. By reversing the tube the force of inspiration can be measured in the same way. The result may be expressed mathematically as a fraction, the expiration representing the numerator and the inspiration the denominator.

I have noticed in the limited number of observations that I have made with this instrument, a marked diminution in the force of both inspiration and expiration—in tubercular cases, the inspiratory force being impaired more than the expiratory.

Another instrument of Dr. Holden's, the respiratory anemometer, through his kindness I am enabled to exhibit.

It consists of a chamber, provided with a light valve, so arranged that it will be moved by the passing current during inspiration and expiration. The movements of the valve are recorded by a marking pen, with which it is connected by a light cog-wheel and lever, the corresponding curve being traced upon a slip of paper, moved along by clock-work. In this way you record not only the force of inspiration and expiration, but also the rapidity and the regularity. More extended observations, than I have thus far been able to make, may possibly disclose some recognizable change in the respiratory curve produced by this pretubercular state.

The vital capacity of the lungs as measured by the spirometer, is certainly markedly reduced in all cases of pulmonary tuberculosis and in subjects who have inherited a strong predisposition to tuberculosis, a low vital capacity, even though no physical signs can be discovered, will be sufficient to warrant active prophylactic treatment.

Treatment may be considered either as prophylactic or curative, and it is my purpose within the limits of this paper to mention only a few of the measures proposed.

As indicated by the loss of vital capacity and the lowered respiratory force the lungs only partially expanded, particularly at the apices, are in just that condition, favorable to the deposit of tubercle. If this faulty expansion can be corrected, then one danger is lessened, or avoided. This I believe to be one of the chief advantages derived from a residence in high altitudes, the more forcible lung expansion being rendered necessary by the rarification of the air. The same thing has been attempted by the inhalation of compressed air by means of the apparatus of Waldenburg and the various modifications of it suggested by others. Various attempts have been made to combine the inspiration of compressed air and the expiration into a rarified chamber, but the necessary apparatus has

been too expensive to be brought into general use. I have had for a year past in my office an apparatus which I had constructed to accomplish this end. It consists of two cylinders, one for compressed air and the other for rarified air. These are connected by tubes with a three way stop cock so arranged that by simply turning a lever the tube through which the patient breathes may be connected either with the compressed air cylinder, the external atmosphere or with the rarified air cylinder. I have found this very beneficial in many cases, but it can only be adapted for office use.

I have sought to accomplish the same object in the construction of this differential respiratory, which consists simply of a double bellows having the valves so arranged that one chamber compresses the air, while the other rarifies it, the breathing tube being connected by a branch with each chamber. By a simple attachment, a glass globe containing a sponge upon which is dropped a few drops of any volatile agent, as eucalyptol or guaiacol, the air respired may be medicated, and thus breathed under compression will reach to a much greater depth in the lungs than under ordinary circumstances. The greater exchange of air accomplished by the use of such an instrument enhances the vital powers, besides expanding and developing the lungs, as shown by the increased vital capacity and the greater chest expansion.

Local medication by means of inhalants to be efficacious must reach the deeper recesses of the air passages, and, as ordinarily practiced, scarcely pass beyond the larger bronchial tubes. With the assistance of the pneumatic cabinet, breathed with compressed air, or from one of the several forms of vaporizers, the inhalant may be made to reach the air cells. One of the best forms of vaporizers I have seen is that made by A. G. Armstrong, of New York, known as the Geyser. It consists of a glass globe six inches in diameter, within which upon the bottom rests a little cup in which

terminates the compressed air tube, the opening being just beneath the surface of the liquid to be vaporized. The globe is air tight, and from it leads the breathing tube. When compressed air is forced through the opening in the cup, the liquid is thrown in a fine spray against the globe and the atmosphere is loaded with the fine vapor, and in this condition is breathed more or less under compression. Various substances may thus be used, such as terebene carbolated vasaline, thymol per oxide of hydrogen, etc. The ordinary zinc respirator is not new, but I have found it very efficient in many cases. It can be worn for hours at a time without inconvenience.

Since the discovery of the baccillus by Koch, untiring efforts have been made to discover some means of destroying them, without at the same time killing the patient, or of dislodging and expelling them from the system.

I have been much interested of late in the accounts I have read of the inhalation of super-heated air as practiced by Weigert, for the purpose of destroying the bacilli. He found that a patient could gradually become accustomed to breathing for several minutes at a time, air heated to four or five hundred degrees. This temperature is destructive to the baccillus, and the success reported by him and others would certainly warrant its extended trial. All the necessary apparatus can easily be improvised by any one with ordinary mechanical ingenuity. The method proposed by Dr. Jno Ege, of Pennsylvania, takes advantage of the antagonism between the bacterium termo and the baccellus tuberculosi by introducing the former into the air passages by inhalation of an albuminous vapor kept long enough for their abundant development. He reports the use of this method during the past year in twenty-six cases, with a cure of four and marked improvement in many others. He found that after a time varying from two to six or eight months the bacilli disappeared from the sputa and there was a

corresponding improvement in all the symptoms.

I am not able yet from my own experience with this plan to say what merit there may be in it, but certainly the favorable reports would justify its fair trial. I have had time to mention but a few of the many plans of treatment which have been proposed for combatting the advances of that fell destroyer which almost decimates the human race, and not satisfied with that, even invades the domain of lower animals, as if seeking other avenues by which to destroy man.

That tuberculosis may be communicated from the lower animals to man and from one case to another, few now deny. The system of crowding consumptive patients in the wards of hospitals with other patients, I believe to be wrong, and the failure to disinfect and destroy the multitude of germs which infest the sputa, which are allowed to dry and in the form of light dust load the atmosphere with poison capable of communicating the disease to others breathing it, may be characterized as almost criminal. Every particle of expectoration should be thoroughly disinfected, and as soon as possible destroyed by burning.

DISEASES OF THE NERVOUS SYSTEM.

A Clinical Lecture delivered at La Salpetriere by
PROF. CHARCOT. Translated from *Le Bulletin Medical*

BY

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Spinal anyotrophy of the scalpulo-humeral form as a consequence of an infantile paralysis, contracted thirty-five years previously.

The case we are about to examine is that of a man affected by a certain form of progressive anyotrophy, and who was formerly afflicted with

infantile spinal paralysis. The following questions present themselves in his case: (1) With what sort of myopathy is he attacked? (2) Is there any relation between

the present anyotrophy and the former spinal paralysis?

This is his history: He is forty-one years of age, and is by profession a worker in steel. When he was two years old he was suddenly seized with a paralysis which affected simultaneously all four members. The sudden invasion of several members is, as you know, one of the characteristics of infantile paralysis. You also know that there is, following this, a more or less complete but never absolute restoration, for there always persists a paralytic atrophy, as as happened in this instance. The left arm was first paralyzed, then the right; afterwards the right leg, and finally the left leg recovered its functions, but only very incompletely. The muscles of the thighs are very well preserved, but those of the legs remain more or less atrophied; notwithstanding this he is still able to walk. Thus the infantile paralysis, having run its course, the patient remained infirm but not seriously affected, still being able to stand and to walk, and as his superior members escaped the disease did not prevent the exercise of his profession, which he only abandoned a year or two ago.

M —— then was in very fair health when the present affection supervened; but since I have made mention of infantile paralysis, I will remind you that in my opinion this disease is neither accidental nor due to a microbe, as some think, and that it also appears in families of neuropathic tendencies. We may make this statement concerning the patient whom I present to you. According to his own account, his mother had paralysis agitans. This is the first point; moreover, one of his brothers is epileptic.

How was it then that he could work in spite of his infirmity? If one has once been afflicted by infantile paralysis, the anatomical alterations persist, and after death one finds the ineffaceable lesions in the anterior horns of the gray matter of the spinal cord; consequently every one at-

tacked by this condition has spinal cicatrices. These are not, however, the only traces that are left by the disease, and you its other anatomical characteristics: certain of the muscles remain atrophied and present fatty degeneration; further, the bones are remarkably fragile. This latter alteration is due, according to some authors, to a functional inertia resulting from the immobility of the limbs. For my part I am not of this opinion, and this interpretation seems to me particularly inapplicable to the present case. Although M —— had always been able to walk, he had nevertheless this fragility of the bones. Not only had the left leg been broken, but still more interesting, he had twice broken the right humerus, notwithstanding that this arm was not affected and that the muscles were not atrophied. I think, therefore, that this fragility is an indication of a profound disturbance of the nutrition of the bones.

M —— had then passed through this stage of the spinal affection and came out of it bearing the marks of it.

I come now to the second act of the infantile paralysis, if there is a relation between the past and the present. Let us admit it for the present and see what will happen.

He is now four years old. The present disease came on in this way: M —— noticed one day that his right arm, the one which had been restored, was becoming feeble. His profession of worker in steel required a certain amount of strength, so his work soon became very difficult. Then the left arm became equally enfeebled, and he noticed finally a wasting of the parts affected. In the end the atrophy and the loss progressed so far as to completely prevent work. Later the legs became enfeebled. He observed at the same time that his members were the seat of very pronounced fibrillary tremors. These tremors, that you may observe, recall what Duchenne (de Boulogne) has described as progressive muscular atrophy, the only form of amy-

trophy formerly known to us. Further, M ——— did not suffer from any disorder of sensation; he had neither *ponæsthesias* nor pains; he hardly complained of any sensations of numbness. The disease had now reached such a stage that the patient went first to Lariborsière, then to Hospital Andral, in the service of M. Debore, who sent him hither to us.

We are just about to examine him before you, but first there are some questions which present themselves just here. We have to do with a patient who was attacked by infantile paralysis when two years old. Twenty years elapsed, free from disease, when he was attacked by an atrophy of the right arm, which was formerly affected by the infantile paralysis. Now what form of muscular atrophy is this? Is there any relation between the recently developed amyotrophy and the former infantile paralysis? Or, better, is it because he had formerly infantile paralysis that he has to-day this newly developed muscular atrophy? Does infantile paralysis definitely put an end to the atrophied period? Or, on the contrary, will not the patients who have had it be exposed to certain invasions of muscular atrophies, if not of the same form, yet of forms very analogous? * * * * *

To sum up the question, is the formula absolute which asserts the non-recurrence of infantile paralysis?

But let us return to our examination. We have to do with a vigorous man who, except for the traces of his infantile infirmity, has every appearance of good health.

Let us turn our attention first to his inferior members. The left leg, which presents the traces of the former fracture, is atrophied, livid and cold; the foot is flabby. As to the right leg, there is the same atrophy, it is cold, cyanosed, and presents the deformity of equino vanes. The muscles of the thighs are relatively very little atrophied, and contrast less with the inferior segments: the general cone-like form of these parts is

nevertheless noticeable. Fibrillary tremors are preceptible in all these muscles.

As to the upper members, one is particularly struck by the atrophy of the muscles of the arm and shoulder. I call your attention in passing to a slight tremor of the hands, which seems to be due to the alcoholic habit, and which has nothing to do with the principal affection which occupies our attention. Both deltoids, especially the right, are very much atrophied. The pectoral muscles are almost absent. The muscles of the arms, the biceps and triceps, the right equally with the left, are very much diminished in volume. I request the patient to turn his back and you notice a decided atrophy of the scapular muscles. However, the muscles of the forearm and the hand are well preserved.

We do not find here the characteristics of the type Duchenne, in which the atrophy begins in the *therian* eminence, but rather those of the type that is known as the scalpulo-humeral.

When the patient lifts his arms slightly immediately the forearms drop because of the paresis of the biceps.

On the other hand there is no participation of the muscles of the face. M ——— can whistle, make faces, completely close his eyes. These negative remarks have, as you will soon see, a certain importance.

What then is this affection, and where shall we class it? In order to do this it will be well to enumerate the different sorts of amyotrophies. I leave out of consideration the muscular atrophies which are due to peripheral neuritis. Two groups remain to be considered.

The one is that which I have named spinal amyotrophies, for the reason that all of this sort depend upon lesions of the cells of the anterior horns of the gray matter.

The other is that of the primitive amyotrophies which have it in common that they do not depend upon alterations of the nerve centres. In these atrophies, which are formerly unknown, and which are carefully

studied at present, the muscles themselves are attacked. Although these two groups are essentially different anatomically, they are often very difficult to distinguish clinically.

I return to the spinal amyotrophies; they present several categories, and in reminding you of them I will merely repeat what I have said long before. One can distinguish: (1) The acute forms, of which one, the acute, is acute anterior tephromyelitis, infantile paralysis; the other, the subacute, is subacute anterior spinal paralysis. (2) The chronic forms of which some are proto-pathic, the others deuterio-pathic.

The proto-pathic chronic spinal amyotrophies are those which depend upon a primitive and systematic lesion of the anterior horns of the grey matter, this lesion being the only one the spinal cord contains. This category only differs from the acute forms in that its evolution is chronic; there exists, consequently, a marked analogy between it and infantile paralysis. It is very well represented at present by what I have called the Aran-Duchenne type.

The deuteropathic chronic spinal amyotrophies originate in secondary and non-systematic lesions of the cells of the anterior horns of the grey matter. They arise under all those circumstances where a spinal affection of any kind extends to the cells of the anterior horns. This is consequently very different from the preceding one. One of its varieties, for example, is the muscular atrophy to be observed in tubes, which results from the extension of the sclerosis of the posterior columns to the grey substance. Now that which occurs in progressive locomotor ataxia is brought about in other spinal affections by an analogous mechanism.

But this secondary localization is particularly customary in that malady which I have set apart into the group Aran-Duchenne, and described under the name of amyotrophic lateral sclerosis.

If, in this case, the original lesion is one

of the lateral columns, there is none the less an alteration of the anterior horns of grey matter, I might almost say necessary, consequence of the fascicular sclerosis. To this double lesion answer both orders of symptoms; to the phenomena of spastic paralysis is added muscular atrophy with fibrillary tremors. This type differs consequently from the Aran-Duchenne; in this latter affection the spastic phenomena are never to be observed, which always exist in the amyotrophic lateral sclerosis; moreover, patients of the Duchenne type can live from ten to twenty years, while the evolution of lateral sclerosis is rapidly fatal because of the regular invasion of the bulb.

Having catalogued this group of spinal amyotrophies, I return to the other grand group of my division, that of the primitive amyotrophies. Under the form of the Aran-Duchenne type have been placed the whole series of progressive muscular atrophies, which resemble those of spinal origin but which do not belong to them. Recently they have been studied more carefully and certain distinctive characteristics have been found; these are the primitive myopathies. They ordinarily appear in young patients, for which reason Erb calls them juvenile forms. They usually take on a special appearance because of their distribution, attacking the muscles of the scapular region and of the arms, avoiding those of the forearm and hand, invading the muscles of the face. In the last place they do not present fibrillary tremors.

All these characteristics exist, as you will see, in this other patient, who is afflicted with a primitive amyotrophy, and consequently we distinguish two morbid varieties. This second patient is a goatherder, and the first symptom which he noticed was that he could not whistle to his animals. His mouth drooped and he could no longer whistle. If the case was complete the occlusion of the eyes would be imperfect. His forearms are attacked, but his arms and his hands are intact. Of the muscles of

the shoulder, only the supra and the subspinales are preserved. There is in his case complete absence of fibrillary tremors; further, several muscles prevent the reaction of degeneration, while the electric reactions are only weakened in the first patient. M ———, however, presents this special point, that the distribution of his atrophy conforms to the scapula-humeral type. His case would be very simple if he presented atrophy of the thoracic eminences.

It is from this point of view that he desires to be compared with his neighbor; but as much by the absence of the atrophy of the muscles of the face as by electric reactions, and above all by the presence of fibrillary tremors, his case differs essentially from the other.

His case then belongs in the class of spinal amyotrophies. To what variety does it belong? Is it to the amyotrophic lateral sclerosis, or to the malady of Duchenne? If it were amyotrophic lateral sclerosis, since he has been afflicted since the age of four, he would have bulbar phenomena; but he has none of these. Further, under the same hypothesis, he ought to present modifications of the reflexes, which is not the case. It is not then with a case of amyotrophic lateral sclerosis that we have to do. It is then a case of muscular atrophy of the type Aran-Duchenne; yes, it is tephro-mylitis. There yet remains this question to resolve. Is there a relation between this affection and infantile paralysis?

I will tell you to begin with, that I have seen a patient with an atrophy of the arm, the result of an infantile paralysis, who fifteen years afterwards was attacked by a symmetrical atrophy.

Deperis, Suligmüller, Ballet and Dutil have reported analogous facts. I explain this evolution thus: the medullary cicatrix resulting from the infantile paralysis and producing in the spinal centre a condition of vulnerability, may it not become the point of departure for a new inflammatory attack, which, less acute in character, pro-

duces a second act similar in its morbid processes to the first?

Since the time of this first observation, I have seen other examples of atrophy in those who had had infantile paralysis. So, then, one can not say such a patient has had infantile paralysis, it is a pity, but he will have nothing more. This formula is not exact in every case, for six, eight or ten years after the original malady, an amyotrophy of a chronic character of the type Aran-Duchenne may appear.

Our patient really constitutes an exception, but from the single point of view of the form of his atrophy, for by all other signs he could well go into the spinal category.

Has the hypothetical conception which I have formulated for you upon the sequence of the lesions a foundation? If you consent to admit an inflammation secondary to a former cicatrix, you will doubtless ask yourself why this secondary inflammation is thus systematized in the anterior horns? One might say that this man had an hereditary predisposition to spinal troubles; in other words, it was not the cicatrix but the predisposition which was in question.

What shall we do for our patient? We will treat him by the actual cautery and electricity, and we may find some hope upon the action of these agents. It would be very different in the case of amyotrophic lateral sclerosis, for every one whose muscular atrophy depends upon this disease is infallibly condemned to the bulbar invasion in four or five years. This disease is in-placeable and can not be arrested.

To return to our patient, as happily for him he is in the Aran-Duchenne category, he may hope for an attenuation. With him the trouble is susceptible of arrest, the hands and the forearms not being finally invaded. All these considerations concerning the differential diagnosis which I have advanced are not entirely useless.

THE ABORTIVE
TREATMENT
OF TYPHOID
FEVER.

BY

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The treatment of typhoid fever as laid down in the books has been very unsatisfactory to me. To treat a patient three weeks or more without the patient deriving any benefit from the treatment is in-

deed mortifying.

Prof. Whittaker taught us if the case be not too severe to give plenty of good milk and let the fever alone. But where is the patient that will be satisfied with the let alone treatment. To confess that you are unable to stop the disease, that it will run its course, is humiliating, to say the least.

A series of questions frequently asked me is, If doctors can not break up the disease, what is the use of treating it? If medicines do not stop the disease, why give them? If they do no good, will they not do harm?

When I began practice I followed the text books in the treatment of typhoid, not having courage enough to try Prof. Whittaker's plan, but of course with the same success that attended other practitioners, viz, the disease run its course. Finally I picked up courage enough to try the Professor's plan. It being in the family of a relative, I thought sure they would have confidence enough in me to trust me and follow my directions. I therefore told the family of the nature of the disease, that it would last three or four weeks, prescribed the milk diet, when the mother exclaimed, "What! can't you stop it sooner than that?" I explained to her that it would have to run its course, when she cleverly informed me that if I could not break it up there was no use of treating the case, that Dr. P. could break it up in three days. Dr. P. was called and of course my services were no longer required.

Since that I have not been quite so frank

in expressing myself, and have been constantly watching the medical literature hoping to learn of some new remedy that would meet my wants. I have tried the iodine and carbolic acid treatment, as recommended by Liebermeister, without success. I have tried the calomel treatment with the same success.

Antipyretics reduce the temperature but do not modify the course of the disease to any appreciable extent; in fact I have serious doubts of the propriety of giving them at all, if given for their antipyretic effect alone. May not the fever be nature's method of getting rid of the poison of the disease?

The administration of a properly restricted diet is of great importance in the treatment of all cases of typhoid fever; milk, judiciously administered, has served me best. Many physicians recommend beef tea. I think it is a serious mistake. About two years ago, in a discussion upon the dietetic management of disease before this society, I spoke unfavorably of beef tea and with the exception of one member the society condemned my remarks; that exception, I believe, was our present president. Being quite young in the profession I did not attempt to defend myself, but now challenge discussion.

Medical opinion has almost by universal consent reverted to the idea that beef extracts are of very little or no value as foods. Works on physiology, therapeutics and pharmacology assign them among the non-nutritious alimentary agents. Permit me to digress and give you a few quotations from some of the ablest authors of this country and of England:

R. D. Blackwood, M. D., Neurologist, Presbyterian Hospital, Philadelphia, says: "The solid beef peptonoid are an admirable addition to beef tea, rendering it not merely stimulant, but a true food." From which we may infer that it alone is not a food. He says further, "It is a waste of time to pour in ordinary beef tea."

Bartholow says: "It is much inferior to milk."

Wallace Wood, of New York, formerly editor *Journal of Reconstructives*, says: "To give the patient wasting with fever beef tea, flax-seed tea, whey, toast water, rice water, barley water, etc., is to give him starvation. These teas, etc., the classic ptisans of antiquity, are not properly nourishment but vehicles for nourishment."

John A. Larrabee, Professor Materia Medica and Therapeutics, Hospital College Medical Department Central University, Louisville, in an article read at the meeting of the American Medical Association, May 8, 1888, said: "As to beef tea there is not a pound of nourishment in a ton of the stuff. Five grains of nitrate of ammonia in a tumbler of water discounts beef tea."

Kemmerich affirms that animals die more quickly if fed upon beef tea alone than those which are left to starve from hunger. See Pepper's System Vol. II Page 691.

Fothergill, in his Hand-book of Treatment, page 537, says: "As a food beef tea ranks low. It contains meat salts, a small quantity of albumen and a little gelatine together with some advanced nitrogenized matter useless to histogenesis, but there is little in it to repair tissue and less to sustain life; there is little real force-bearing material in it. For the starving fever patient to give him beef tea alone is almost to give him a stone when he asks for bread. It makes him feel better for the time being, but that is due to its stimulating properties."

As stated above, I have anxiously watched the medical journals in the hope of finding something better in the way of treatment of typhoid fever, and upon receiving the journal of the American Medical Association for September 29, 1888, and noticing that Dr. Barnett had a paper on the abortive treatment of typhoid fever, I at once began its perusal. After carefully reading the paper I resolved to give the treatment recommended a trial. A brief abstract of the paper is here appended, together with my

experience with the treatment advocated:

In 1886, J. R. Barnett, M. D., of Veenah, Wis., Chairman of Committee on Practice of Medicine, read a paper before the State Society on the treatment of fevers in which he recommended salicylate of ammonium, having used it for two years. The title of his paper was "Salicylate of Ammonium as a Specific Germicide, Antiseptic and Antipyretic, Especially Adapted to the Treatment of Typhoid and Allied Fevers and Septic Inflammations," and his conclusions were:

1st. The salicylate of ammonium is ranked among the most efficient of the antipyretics.

2d. In all fevers characterized by extreme adynamie it ranks among the safest, owing to its ammonium base.

3d. It is stimulant as well as antipyretic, and this of itself fulfills indications only met by a combination of remedies.

4th. It is an agent of wide germicidal powers, being promptly efficient in affections of great etiological and pathological differences, each confessedly arising from its own proper specific infecting micro-organism.

5th. As a remedial agent in typhoid and remittent fevers, it is unsurpassed, aborting them at the outset under favorable conditions, and greatly mitigating their severity and danger under circumstances less favorable.

In June, 1888, he read another paper before the same society in which he says: "More than fifty cases have fallen under my personal observation which have afforded substantially the same results, some were aborted in the first two or three days of high temperature after a preceding malaise of several days; some ran a week and some nearly two weeks, with mild symptoms throughout, but three cases lasting beyond the tenth day. Out of a total of seventy cases of typhoid only two died, one from enormous epistaxis on the seventh day, the treatment in this case being mostly quinine on account of the hemorrhage, the

other from intestinal hemorrhage on the third day of sickness in bed with a fall of temperature to 99° , dying early next morning, he being a hard drinker. Dr. Barnett says its effects are undoubtedly sedative and depressing. He gives the following formula:

R
 Acid Salicyl. ʒii
 Am. Carb. ʒiii
 Ag. Menth, pip ʒiv M

Sig: A teaspoonful every two hours; this may be doubled in many cases. Symptoms of asthenia require an increase of the am. carb.; on the other hand if the stomach be irritable any alkaline excess is objectionable and a neutral solution is preferable. By taking out twenty grains of the ammonium from the above formula, a neutral solution is obtained. It lessens the frequency of the intestinal discharges, modifying their character for the better. Where constipation is present it seems to act as a laxative. The explanation for this is the natural evolution of the disease. Cutaneous and renal excretion are greatly stimulated by the salicylate, the quantity of urine is augmented, grows lighter in color and less offensive in smell. Headache is relieved to a degree out of proportion to the temperature ebb, probably from an analgesic property; sleep is promoted, the comfort of the patient is in every way promoted, except the ringing in the ears, auxiliary treatment is rarely required. It chemically changes the ptomains or undetermined noxious substances, so as to render them innoxious, without necessarily destroying the vitality of the bacteria causing them."

Here the doctor quotes from Prof. Semmole at the Ninth International Medical Congress, who says: "The true part played by bacteria in pathology is the production by them of certain noxious and decomposed blood, which substances and not the bacteria are the potent factors in the causation of disease."

Prof. Larrabee, of Louisville, in a paper before the section on diseases of children

at the meeting of the American Medical Association, before referred to, said: "I am satisfied that Dr. Barnett, of Wisconsin, and others are correct in the statement that according to the accepted theory of heat production in fever, ammonium is the proper base for salicylic acid;" and in a private communication gives five reasons why it is so: He says, 1st. That he has found it practical. 2d. The stimulating influence of all ammonium preparations upon the vaso motor centers of the spinal cord. 3d. It prevents coagulation of the blood, to which in the adynamic disease, with loss of watery constituents of the blood corpuscles, there is a marked tendency. 4th. It retains the fibrogenous matters in the blood. 5th. It is itself oxidized in the system becoming nitric acid, and there lessens or inhibits the ozonizing function of the blood, preventing or checking, to a great extent, metamorphosis of tissue.

Dr. Sullivan, of New York, says: "It will not reduce the temperature as rapidly as antipyrine or antifebrin, but the antipyretic effect is more lasting than that produced by either of these agents."

Dr. Oscar A. Fliesburg, of Hudson, records his experience in typhoid as follows: "I have been able to reduce temperature in a short time from 105° to 99° and keep it there. My cases have progressed without much other medication to a favorable end in a shorter time than by the older methods. The fact stands undisputed and proven that in salicylate of ammonium we possess a sure remedy to reduce temperature and by its germicidal and antiseptic properties, are able to abort zymotic diseases.

Dr. D. L. Sauerherring, of Wausau, in describing an epidemic of fever, says. "The remedy par excellence proved to be the salicylate of ammonium. It invariably reduced the temperate to $99-100^{\circ}$, keeping it there during the entire course of the disease, diminishing the rate and force of the pulse and causing in the majority of cases profuse diaphoresis, when given early it

would generally break up an attack, the patient being able to be up and about the house in two or three days." He says, he is unable to explain the action of the drug.

My own experience with salicylate of ammonium in typhoid fever is limited to four cases, three of which there can be no possibility of mistake in diagnosis, there being seven cases in the same family within less than three months, several of them being quite typical. The first case, that of the mother not being typical, I failed to make a diagnosis properly, thinking it was only remittent, and took no precautions in the way of disinfectants. The family being anything but cleanly, I thus account for the disease going through the family, all taking the fever except one.

My first case which I treated with salicylate of ammonium was a young lady, aged about twenty-two, taken to bed sick November 10, 1888, after nearly a week of malaise. I was called in November 14. A diagnosis was readily made, it being the third of the family taken sick. Having just read Dr. Barnett's paper, I determined to give the remedy a trial, but not having any salicylic acid on hand, I put her upon a placebo until I could secure some; accordingly on the 16th I put her on the remedy and on the morning of the eighth day after taking the salicylate, she was clear of fever and remained so, her temperature falling from 104° to 101° by the fourth day. A severe diarrhoea rapidly disappeared without any auxiliary treatment, the patient not experiencing any unpleasantness from the remedy.

Here was a rather severe case of typhoid, disappearing in seven days treatment.

The second case was a brother, aged eighteen, who took to bed after over a week of malaise, while the first case was yet in bed. I at once put him upon the same treatment, except slightly increasing the dose. This patient was entirely free from fever in six days.

The third case was also a brother, aged

three years. This case was also placed upon the same treatment, with the same qualifying results, but took a relapse and was again put on the same treatment with the same result.

There seemed to be a feeling of well being early manifest itself in each of these three cases. Another case in this family begun with marked symptoms of croupous pneumonia and I did not put her on the salicylate, but treated the complication as if primary. The last case in this family, a boy about eight, was very mild and I did no more than restrict his diet.

My fourth case was that of a young man, aged twenty-three; section hand on the railroad, lived in a village where a number of cases of typhoid had broken out and were being treated by the physicians.

On the fifth day of his sickness in bed his father placed him in a bed prepared on a wagon and brought him home, a distance of about seven miles, where I was called to see him. The case seemed to me to be a typical case of typhoid. I at once placed him upon the salicylate of ammonium, as in three previous cases, excepting that I just doubled the dose, with the result that on the fourth day he was clear of fever and remained so. In this case there was pretty free sweating, but not so in either of the preceding cases.

There may be a doubt as to this last being typhoid, but the symptoms, malaise for near a week, epistaxis, headache, general aching of the back and extremities, gradual onset of the fever, abdominal tenderness and tympanitis, together with the history of a number of cases in close proximity in the village, point very strongly to typhoid fever.

THE TENTH

CONGRESS.

Professors Virchow, Wm. Bergmann, and Waldeyer, composing the committee for making the arrangements preparatory to organizing the Tenth International Medical Congress, which will meet in Berlin next year, have already held a meeting and entered upon their work.

GENERAL SURGERY.

URETHRAL
STRICTURE.

BY
JOHN YOUNG BROWN,
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Read to the Kentucky State
Medical Society, at Rich-
mond, May 9, 1889.

In October 1888, I was called to see P. S., age 28 years. I found him suffering intense agony from retention of urine. Examination revealed slight hemorrhage from the urethra, the result of attempting

forcible catheterization, prior to my seeing him. He gave history of prolonged suffering from gonorrhoea and stricture dating back to 1880. He informed me that he had been suffering for several days with partial retention and on the night previous to my visit, his agony was so intense, a physician had been called in who had made an effort to relieve him by forcible attempts to pass a catheter. Failing in this, he had given him a hypodermic and left. I made a careful examination of the patient and found that he had a callous stricture situated in the anterior bulbous urethra, through which I was unable to pass even the smallest "filiform bougie." His bladder was very greatly distended and I realized that something must be done, so I determined to call in consultation Dr. Arch. Dixon. Dr. Dixon was accordingly summoned. After he had examined the patient and failed in his attempts to pass the stricture, we determined to anæsthetize him, in the hope that a guide might then be passed. Accordingly he was placed on a table and informed, that should we fail in our efforts at catheterism, we would then proceed to operate as we thought best. Anæsthesia failed to relax the stricture and our efforts to pass it proved as futile as before. Realizing the very great difficulty of making an external urethrotomy without a guide, and in view of the fact that the stricture in this case was situated in the anterior bulbous urethra, I suggested to Dr. Dixon that we make a supra pubic cystotomy, introduce a guide through the vesical

urethral opening (retrograde catheterization) and then make a median cystotomy, introduce a full sized drainage tube and subsequently treat the stricture. Deeming this apparently extreme and novel procedure the safer operation in this case, for reasons which I shall subsequently give in full, I accordingly proceeded as follows: The parts were prepared in the usual way; the perineum and pubes were shaved, scrubbed and thoroughly irrigated with mercuric bichloride (1-1000). The bladder being greatly distended, I thought it unnecessary and perhaps unsafe to "balloon the rectum," so the colpeurynter was dispensed with. An incision about 2½ inches long, was then made in the median line extending to the symphyses and the recti muscles separated. The prerescical fat was then broken down bringing the tense bladder into view. This was transfixed on either side of the wound and incised. After the urine had escaped, the bladder was carefully flushed with hot Thiersch's solution. The index finger of the left hand was then introduced into the vescus, along which as a guide I easily succeeded in passing a sound through the vesical urethral opening into the urethra, a perineal guide having been obtained, a median cystotomy was made and a full sized drainage tube (Thompson) was introduced. The bladder was again flushed, and the supra pubic incision in the vescus was closed with catgut after the manner of Lembert. The external wound was closed and dressed in iodoform gauze. The drainage through the perineum was perfect and the patient expressed himself as feeling very greatly relieved. On the eighth day after the operation, I again attempted to pass the stricture and found as I expected, that it had greatly relaxed since the irritating action of the urine had been withdrawn, and I readily succeeded in passing a No. 5 (U. S. sound) through the obstruction. Internally urethrotomy was immediately made and a No. 14 (U. S. sound) was passed into the bladder. For reasons which I shall hereafter give, the

perineal drain was retained and the urethra was kept open by the daily use of a full sized sound. The supra pubic wound healed by primary union, and on the 26th day the perineal drain was removed, and the patient allowed to pass his water *per viam naturalem*. Patient made an uninterrupted recovery and to-day a full sized (14 U. S.) sound can readily be passed into the bladder.

The difficulties attendant upon surgical attempt to gain access to a bladder, where a stricture of the urethra exists, impassable to any variety of catheter or guide, are perhaps only paralleled by those which confront the "rich man" in his efforts to gain entrance into the kingdom of Heaven, or the camel in his endeavors to go through the eye of a needle. Retrograde catheterization is by no means a new procedure; it was first practiced in 1757 by Veaguin, a surgeon of Toulouse, (*Internat. Enc. Surg. Vol. 1.*) since which time it has frequently been successfully resorted to.

"Sédillot formerly expressed the opinion that, in the absence of a pre-existing fistula, if in the course of an external urethrotomy, undertaken for an impassable stricture, it were found impossible to discover the posterior end, the surgeon would be justified in doing supra pubic cystotomy at once, in order to practice retrograde catheterization" and there is now abundant evidence to prove the wisdom of his opinion. Under the modern improvement in antiseptic technique, and with our present knowledge, of the pathology of urine fever and urethral stricture, I feel that I am justified in the belief, that the above operation should be allowed a place in legitimate surgery. A brief review of the three recognized operations for the relief of impermeable stricture will perhaps throw more light on this point.

First, of the operation proposed by Cock. This consists in opening the urethra behind the stricture and going into the bladder without a guide. He advises that the knife be passed at the first thrust to the apex of

the prostate and that the incision be subsequently enlarged and a perineal drain introduced. The patient may then be left to pass his water permanently through the fistulous perineal opening, or the stricture may be afterwards treated and the urethral canal restored. Did the above operation "pan out" practically as beautifully as it does in theory, it would unquestionably rank as the superior operation, but, like the following two, it has its drawbacks and difficulties which I shall shortly attempt to point out. The next operation is a poor modification of the former. It consists in opening the urethra behind the stricture, cutting forward through the obstruction and then restoring the canal, all of which proceeding must be done without a guide.

Mr. Erichsen, in speaking of this operation says: "I have no hesitation in saying it is one of the most troublesome in surgery. I have more than once seen the most skillful operators fail in their endeavors to accomplish it and compelled to relinquish the operation without concluding it, or succeed after most prolonged and painful attempts."

The third, and by far the best of the three, is the operation which bears the name of Wheelhouse, (*British Medical Journal, June 1876, Annals of Surgery, Sept. 1888*). This consists in opening the urethra above the stricture, and then introducing a director upon which as a guide the obstruction is to be divided. Although this is by far the better of the three operations, it has like the preceding, its difficulties, failures and dangers which an analysis of reported cases will show.

From the foregoing consideration, I think we are justified in concluding that external urethrotomy without a guide is exceedingly difficult and unsatisfactory. Upon first thought, it would seem that a surgeon, who makes a supra pubic cystotomy in order that he might pass a sound through the vesical urethral opening as a guide to perineal urethrotomy, was resorting to an extreme measure, but with the present pro-

tection, which carefully carried out antiseptic technique hold out, I cannot see why we may not with as much impunity make an epicystotomy as we do an exploratory laparotomy, for truly the dangers of the former are by no means great in comparison with those of the latter, especially as results reported thus far are uniformly good.

With our present knowledge of the pathology of urethral fever and urethral stricture, and with the now perfected antiseptic technique, it is safe to say, that supra pubic cystotomy with retrograde catheterization offers advantages over any of the foregoing methods, in selected cases, and by selected cases I mean those in which the stricture is situated in the anterior bulbous and spongy urethra, and where retention exists at the time. In these cases I think the following advantages can be justly claimed for it: First, it is easy to perform. Second, it assures a guide through the perineum. Third, in view of the fact, that the major portion of so-called impervious strictures will relax, when the irritative action of the urine is withdrawn, it enables the surgeon to make perineal section, drain the bladder and subsequently make urethral urethrotomy. Fourth, when internal urethrotomy is subsequently made, the urine being drained through the perineum, the internal wound can be separately treated and as no urine comes in contact with it, the possibility of urine fever is avoided. Fifth, in all cases of impervious stricture there is always more or less chronic inflammation of the viscus and perineal section, and drainage is unquestionably the ideal treatment of this condition. Sixth, as the perineal drainage relieves all tension on the bladder, the supra pubic incision can be close and primary union may be looked for.

In regard to technique, it must be insisted that rigorous and careful antisepsis be carried out, for neglect in the slightest detail in this direction may result disastrously. The bladder should be flushed daily with an antiseptic fluid (preferably Thiersch's) and neither sound nor catheter should be introduced unless carefully sterilized.

EYE EAR AND THROAT.

DISTINCT AND
INDISTINCT
VISION.

BY
JAMES JURIN,
LONDON.

An appendix to "a compleat
system of opticks,

BY ROBERT SMITH, L. L. D.

Professor of Astronomy and
Experimental Philosophy,
at Cambridge, and Master
of Mechanicks to his
MAJESTY." Cambridge,
1738.

Continued from May.
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And this alteration is supposed to be made by certain muscular fibres within the substance of the crystalline. But this sentiment has not been so fully explained by the learned author, as we could wish.

We shall therefore only take notice, that if the eye is to be accommodated to near objects, by rendering

the anterior surface of the crystalline more convex, while the hinder surface grows flatter, which for many reasons seems to be the most advantageous and convenient method; then in order to see an object with *Perfect Vision* at a distance of 5 or 6 inches, the radius of that anterior surface must be lessened from 3,3081 to 2 nearly, if the radius of the hinder surface be increased only from 2,5056 to 3. And in order to see an object with *Perfect Vision* at the distance of 14 feet 5 inches, the radius of the anterior surface must be increased to 5 nearly, if the radius of the hinder surface be diminished no more than to 2. So that while the hinder radius changes from 3 to 2, the anterior radius, in order to see perfectly at all distances from between 5 and 6 inches to 14 feet 5 inches, must be more than doubled. But this surely is too great a change for a substance of such a consistence as the crystalline humour to admit of.

I might add, that the demonstrations, upon which that learned gentleman founds his opinion, are all built upon this supposition, that in viewing objects which appear confused, the pupil is always contracted to the least size it is capable of. For that this supposition is contrary to experience, will appear anon.

127. Meeting with no satisfaction in any of the *hypotheses* above related, I have applied myself to a diligent consideration of the parts of the eye, in order to find out, if possible, some power or powers seated within it, by which its conformation may be so altered, as adequately to answer the effects observed. And in order to enable the reader to judge how far I may have succeeded in this research, I shall, before I lay down my own opinion, examine a little into those parts of the eye, which I think subservient to the effect in question.

128. The *cornea* is a compressible and springy membrane, easily giving way to any force external or internal, and easily restoring itself to its former figure by its own spring assisted by the pressure of the aqueous humour within it.

129. The *uvea* is a muscular membrane, and as such is capable of contracting itself into less dimensions. It arises from a circular ridge or protuberance running all along the inside of the *cornea* at its juncture with the *sclerotica*, which ridge I do not remember to have seen hitherto taken notice of by any anatomist.

That the *uvea* is furnished with a narrow ring of circular muscular fibres on the edge next the pupil, is now generally agreed by anatomists, though I think, not so much from their being able to demonstrate those fibres, as from reason; for as much as the contraction of the pupil upon a strong light, or upon attentively viewing a very near and small object, is plainly visible, and that contraction is justly presumed to be owing to such a muscular ring. Mr. Ruysch indeed has represented this ring of muscular fibres in one or two of his figures, but he tells us at the same time, *Sculptor hic justo distinctius repræsentavit, nam in objecto ipso non ita luculenter visuntur*.⁴ And in another place he ingenuously declares,⁵ *Fateor hasse fibras circulares non tam luculenter conspici posse, quin oculi mentis in subsidium sint vocandi*.

It is likewise an agreed point, that the *uvea* is furnished with straight fibres inserted into this ring, and having their origin from that part of the *uvea* which is connected to the inner edge of the *cornea*, and that these straight fibres, which are put upon the stretch and drawn out into a greater length when the ring contracts, do again by their spring, or by their muscular force, restore themselves to their former dimensions, and thereby serve to dilate the pupil when the abovementioned muscular ring ceases to contract, and is in a state of inaction.

TREATMENT OF HEMORRHOIDS.

In a recent number of one of the exchanges is an article on the "Treatment of Hemorrhoids." After describing the method of transfixion, the author says: "Cut off the ligated tumors *down* to the ligature and press all back with the rectum." The latter clause of the sentence is superfluous, in that if all the tumors are cut off "to the ligatures," there would be nothing to return. But it is to the advice that I took exception. Just so sure as it be heeded dangerous consequences will result. One of the dangers to be apprehended in the ligating of piles is that the ligature will slip and hemorrhage result. In no case should more than two-thirds of the tumor be cut off, and for safety, not more than one-half. Such advice as he gives is dangerous in the extreme. The same author, in speaking of injecting internal piles, says: "*Properly* inject the *proper* quantity of the *proper* styptic into the tumor." It is not mentioned what the *proper* styptic is, nor is there any elucidation of the subject in the advice which quickly follows, viz.: "It is, however, safe to *select* a styptic and inject a *safe* quantity into one or two tumors, and when you observe that it acts well use *it* again and *more* of it, if need be, or to discontinue its use if it acts badly, and use *another* and in *less* quantity, perhaps, for the time." This is certainly very valuable (?) advice and should be heeded.

⁴ Thes. Anatom. II. p. 87.

⁵ Ibid. p. 14.

OBSTETRICS AND GYNÆCOLOGY.

CARDIAC
COMPLICATIONS
DURING
PREGNANCY
AND PARTURITION.

BY

J. P. THOMAS,

M. D.,

PEMBROKE, KY.

By way of preface let me disclaim any intention of including in this brief paper any discussion of organic diseases of the heart, i. e., that had previously been diagnosed as such, but only those cases of inorganic cardiac trouble, or, as it were, of

spontaneous origin—seemingly set up as a consequence of the pregnant state—cases without previous cardiac trouble, and cases whose previous history was one of perfect health.

However, cases which are sufficiently acute as to result, as a finale, in permanent organic disease, or the symptoms are so alarming at the time as to require the most watchful care and heroic means to prevent sudden death, a result that often occurs before there is any structural change in the heart.

The numerous cases of sudden cardiac complication during pregnancy, and parturitions to the lot of the writer in an obstetrical practice of over thirty years, has been a source of much anxious solicitude for the safety of his patients, and the cause of considerable study and research as to the best means of bridging them over the trying ordeal, but so far with but poor success, gaining little or no aid from obstetrical authorities.

As a matter of fact, as far as my limited investigation of the literature of this important subject, and opportunities for consulting authorities have extended, it is a surprising and disappointing truth that but little or nothing of value has been written on these alarming complications, though they may be only temporary. Playfair, Leachman, Lusk, Tyler Smith, Parvin, or even the older ob-

stetrical writers, Ramstothan, Duns, Cazanx and Churchill have given the subject but a passing notice. Playfair has only a paragraph. Tyler Smith, in a half page under the head of sudden deaths occurring in the puerperal state, speaks of cardiac, venous, and arterial obstruction; mentions obstruction of the pulmonary arteries as dependent upon cogula from the veins; the sudden formation of clot in the heart, which he thinks is more liable to occur during a fainting spell. He also speaks of air in the veins produced by the generation of gas in the uterine cavity after delivery, or by the decomposition of intra-uterine matters, such as coagula or a dead foetus, etc., as when the the os uteri is closed, the mechanical arrangement of the uterine veins favor the entrance of air into the circulation by this route, and of course as soon as it reaches the heart, the most serious symptoms are developed, etc. But no minute description of the sudden valvular lesions that are liable to occur by even a small heart clot, or deposit of fibrine upon the valves, not a word about pericardial effusions, spontaneous hypertrophy from displacement, and overwork of the heart from upward pressure, valvular insufficiency, also from pressure, in some cases producing almost entire closure of valves. The immense seepage or drainage of serum from the blood by exosmosis, constituting the anasarca and leaving the blood comparatively in a condition bordering on semi-solidity, and of course favoring fibrinous deposits embolized.

Cazeaux has more to say on these complications than any other writer whom I have had an opportunity of consulting, and he is vague and unsatisfactory. As to treatment he depends upon depletory measures to carry the patient through parturition, as it is customary for the dropsy and difficult respiration to disappear after delivery.

Thos. Moore Maddin, in Quain's Dictionary has only two short paragraphs on the general edema. He especially draws

attention to those cases where the face and upper extremities are involved, and admits that this symptom is always an alarming one during pregnancy. But like nine out of ten of obstetrical writers can only see in it a warning of the occurrence of eclampsia, or so-called "uremic" convulsions, and recommends depletory treatment as crippling over loins, active saline cathartics, and of course the daily testing of the urine for that awful "bugaboo" albumen, and concludes by stating the case must be treated as one of impending convulsions. He does not mention the heart as playing any part in the phenomena presented in a case of anasarca during pregnancy and parturition; and yet there have been and will continue to be many cases in which the necessary upward pressure and the plethoric systemic condition, incident to the latter months of pregnancy, impedes the free action of the heart to such an extent as to produce, if not organic alterations in the valves, or cardiac tissue, at least temporary or inorganic disease, crippling the heart to such an extent as to produce general dropsy. Cases in which the heart is the cause of the anasarca and the excretion of albumen, when such occurs; but every observer must admit there are many cases of general edema without the least trace of albumen, and hundreds of cases where the excretion of albumen is abundant, and yet not a symptom pointing to the occurrence of convulsions.

But as I long since, in a paper published in *Gaillard's Journal*, attempted to refute the albuminous theory of eclampsia, and to establish the fact, as long since pointed out by Marshall Hall, that they were altogether reflex in origin. Therefore I shall not stop to offer an argument on this still much disputed question, but endeavor briefly to draw your attention to a class of cases that every obstetrician must necessarily meet with more or less frequently in his practice, but may have occurred in my practice oftener than is the average.

I allude to those cases in which the edema extends to the upper extremities including the face, but more especially cases where the anasarca and dyspnoea continues unabated after delivery. Cases in which the evacuation of the uterus produces no subsidence of the effusion or abatement of the distressing dyspnoea, the latter in many cases so alarming as to constantly threaten the life of the patient by suffocation. Cases in which we find one or both lungs in a hydrostatic condition, or hydro-pneumonic state, on auscultation resembling the extreme congestive stage of pneumonia, but not interstitial edema of the lungs proper, but hpdrothorax.

Cases in which there is evident effusion into the pericardium, in which auscultation reveals perhaps valvula insufficiency, the sounds of the heart are of course comparatively inaudible, being obscured by pericardial effusion, yet with careful stethoscopic auscultation a perceptible murmur may be heard, fortunately in the systole, more rarely in the diastole, which latter, as we have been taught, points to more serious organic trouble.

The valvula insufficiency may be caused by pressure or the deposit of fibrine upon the aortic valves; the excessive drainage of serum from the blood leaving it in a condition readily coagulable, which of course favors fibrinous deposits, emboli, etc. In all these cases, as a general thing, the urinary secretion is scant, often the urine is loaded with albumen, but perhaps as often not a trace can be discovered by the most approved tests.

These patients are liable to die at any moment from heart failure, or heart clot, or overflow of the lungs, and as before stated are liable to be mistaken for pneumonia in its congestive stage, as there is always some cough, and that of a pneumonic character. Some rales can be heard in every case where the effusion has reached the lungs.

But the history of a recent case will better illustrate the character of cases to which

I wish to call the attention of the members of this society, with the hope that I may succeed in calling out an expression of the experience and learning on this subject of some at least of our able physical and differential diagnosticians and obstetricians. If so I will have accomplished my object in writing this paper.

On March 25th, 1889, I was called to see Mrs. McC. in her last month of pregnancy on account of her inability to lie down. Her history is that of perfect health from infancy up to the present pregnancy, which is the fourth, except an attack of malaria in 1876, when she gave birth to a premature child; the miscarriage was *evidently produced by the malarial attack and neglect in taking sufficient quinine.*

Her first two labors were easy and quick, followed each time by a "good getting up," both children healthy, one aged twelve, the other nine years.

Has enjoyed perfect health since her recovery from the miscarriage in 1876. She will be 32 years of age July, 1889. I found her sitting in one chair with a pillow on the back of another and her head resting on her arms, which were supported by the pillow. She pantingly, or rather gaspingly, informed me that for ten days and nights she had been unable to assume the horizontal position for ten minutes at a time without impending suffocation. That she had procured all the sleep she had enjoyed in the position I found her; that she could not only not endure the slightest reclining position, but was forced to incline her chest forward to breathe at all.

Though the subject of general edema she still was the picture of health. The entire cellular tissue was distended with water, her eyelids and face so enormously edematous as to nearly close her eyes. Both lower and upper limbs three times their natural size; abdominal dropsy with evident effusion over lower half of left lung, yet at this visit I could not by percussion or mediate auscultation discover any valvula or hyper-

trophic trouble with the heart, and, except a labored pulse beat, and a marked displacement of the apex to the right, the apex sound being within a half inch of the left border of the sternum, there was no structural change in this organ perceptible.

The respirations were 50 to the minute in an upright position, and all the time gasping; the pulse full; complained of great oppression in the pericardial region. She was immediately bled to the amount of a quart, the blood being very dark and sticky, coagulating as fast as it reached the basin.

This gave great relief to the oppressed respiration, and in a short time had diminished the respiration to thirty-five, sitting posture; could lie in a half-reclining position, and in an hour, though the respiration was increased to forty in the horizontal position, yet she was comparatively comfortable. She was immediately placed on the "time-honored" prescription, and which there is none better, of calomel, digitalis and squills, 1 gr. to each pill; one every three hours until large dark dejections were procured, then thrice daily. A full saline cathartic ordered at once; kidneys sluggish and urine scant; half teacupful of infusion of buchu and 20g rains nitrat epotash, every four hours until free flow of urine. Urine not examined.

Finding she was in a few days of her term, and confinement expected about the last day of the month, I of course hoped from many observations that if I could sustain the heart by lessening the effusion until delivery that the cause would then be removed and the effusion be rapidly absorbed and eliminated and the danger passed.

However, on the 27th all the benefit from the venesection had vanished and she was in the same alarming and distressed condition as on my first visit, with extreme nervousness and more debility added. The cyanosis more marked on any attempt to assume a horizontal position.

My gynecological chair was sent for and the patient placed on it as a permanent bed.

The movable head and foot supports could be so rapidly raised and lowered that her head and body could be raised in an instant when threatened with cyanosis or suffocation, which was the case in a few minutes on trying to lie down. The tincture of digitalis in 30 drop doses every four hours was added to the previous treatment.

Though the pill was acting freely as a cholagogue, I ordered an occasional dose of sulph. magnesia and bitart. of potass., and placed her on iodide of potassa in ten grain doses *terindie*, to be increased five grains every three days until ninety grains was given per day. Under this treatment the effusion was kept somewhat reduced and the patient able to assume at times, for an hour or more at a time, a half recumbent position, until on the 29th of March she was taken in labor at 10 A. M.

She was removed from the chair and placed on a bed prepared for her confinement only in a half sitting position. The labor progressed rapidly to delivery at 11:30 without great suffering; but candor compels me to report a risk I was induced to take through the pleadings of the patient, viz., to permit her to take a few whiffs of chloroform on a handkerchief, when she suddenly fell back and her head rolled off the pillows, and, apparently she was dead. Instead of farther lowering her head, according to nealition, I raised her head and chest, threw water in her face and had the doors and windows thrown open, when she soon began to gasp for breath, and with a little fanning was restored in a few minutes to her former condition. Moral—Never administer chloroform to such patients.

There was a large flow of amniotic fluid (*liquor amoni.*), and of course expecting almost instant relief from her dyspnoea, she was placed upon her back and perfect quiet enjoined, but to my surprise her respiration, which had never become normal, was suddenly increased to a mere gasping, alarming cyanosis, and before the nurse or I could render assistance in raising her to an upright

position, she had “bolted” to a sitting posture. The cyanosis disappeared and the natural color returned to her face, but the labored breathing continued until she protested that she would die if not allowed to turn her feet out of bed onto the floor, which I was forced to permit or see her die of suffocation. Of course her extremities were carefully enveloped in woollens, but she sat upright on the edge of the bed within twenty minutes after delivery for twenty-four hours without a change of position, when she was again placed on the surgical chair—sitting—with her feet hanging over the lowered foot support.

There was but small diminution in the general effusion, no decrease in the frequency of respiration; pulse feeble and small, requiring deep pressure to distinguish it at the wrist, on account of the edema of the arms and hands. Knowing the blood to be thick and unusually plastic, she was ordered 10 grs. of carb. ammonia every two hours.

I desire to call your special attention to this drug in these cases. The heart must be sustained by stimulation as well as tonic, the blood kept alkaline and as thin and decarbonized as possible. There is no drug that holds out more hope of accomplishing these results than the diffusive stimulant, strong, alkali, and at the same time the most efficient expectorant as carb. ammonia. If there be any drug that will prevent the deposit of fibrin it is carb. ammonia. It not only decarbonizes, but it actually aids in oxygenizing the blood and thus sustains the weakened heart in these cases, pneumonia, or for any cause where there is danger of heart failure.

This chair proved of incalculable benefit to my patient, and aided much in ultimately saving her life, as she occupied no other bed for over three weeks. On the fourth her condition growing worse instead of better, blisters, crescent shaped, so as to encircle the left mania, were applied, the outer circle of the top covered superior portion of

the left lung to its apex. A narrow strip of blistering plaster up and down the sternum, widened at the upper end so as to cover the entire heart.

The effects of this blistering was marvelous. Having a few days before replaced the tinct. of digitalis by the decoction of the leaves, $\bar{3}$ ss to one pint of boiling water, which is much more reliable than the tincture. Dose, $\bar{3}$ ss. every four hours in urgent cases, as a diuretic and heart tonic, iod. pot. $\bar{3}$ i, acqua $\bar{3}$ i. Signa, 10 drops three times per day, to be increased every three days by 5 drops, until 30 drops was reached, or 90 grains per day.

April 5th.—At the visit auscultation revealed a distinct valvula murmur, apparently over the aortic valve, and from its rasping sound, I diagnosed fibrin upon the lace work of the valve.

A few hours after, on attempting to swallow a dose of sulph. magnesia, her head dropped upon her lap and she ceased to breathe. The nurses thought she was dead, but raised her to a sitting position and she revived. The general edema was subsiding. On reaching the house, I found her cyanotic, but able to speak, and say she was feeling better. Blisters renewed.

April 6th.—Another examination convinced me, that there was beginning organic disease of the heart, and I had my friend Dr. Jno. P. Bell sent for in consultation. We were both led to believe, we had to deal with a mitral organic insufficiency from the murmurs we heard and the extreme cardiac disturbance. At this time the effusion had nearly left the lung, and in fact there was a general "falling of the waters," now principally confined to the lower extremities, and pelvic region, with some ascites. As each vesication had greatly relieved the most distressing symptoms, and as the murmurs interfered with the vesicants contact with the pericardial region, we applied a very large blister over the entire back of left lung, extending over the posterior cardiac region, as a dernier resort.

Our prognosis was death at any moment. Dr. Bell's opinion frankly given me on his leave-taking, was that my patient could not stand the immense strain in efforts to breathe, and would not live over 48 hours and die from heart failure, but that the ammonia was all that could sustain its action, with the aid of a full dose of fet glove.

In a few hours after full vesication had been secured, there was marked improvement in all the immediate alarming symptoms. On seeing her the next day, Dr. B. was unable, as he expressed it, to express his surprise at the change in her condition. We are both earnest advocates of blisters where indicated, but no one could have hoped for such results from any therapeusis.

Dr. B. saw my patient twice, and at his last visit, though so much improved, he could not believe it permanent. In this connection I wish to express my high appreciation of Dr. Jno. B. Bell's able and judicious counsel in this case, and also my esteem for him, as to head and heart. The treatment previously disconnectedly outlined, was continued for four weeks, gradually diminishing the dose of iodide, until she is now taking only 15 grains per day.

The blister was kept open for ten days, but in four days after the last vesication she could comfortably assume almost a horizontal posture.

The edema remained stationary for two weeks longer, and was very slowly absorbed and eliminated. The pulse was frequent throughout, ranging from 100 and 120°; and yet at no time was the temperature above normal.

SYNOPSIS.

The points of interest in this case are:

1. That no attention was paid to the puerperal feature, that she sat up almost continuously from delivery for three weeks, without the least tenderness or unfavorable symptoms, connected with childbed. No suppression of the lochia.

2. That though with her previous children she had throughout lactation, a plenti-

ful flow of milk, but in this instance there has never been the least indication of its secretion.

3. The continuous large doses of iodide, and three grains of calomel per day, for 25 days without a symptom tyalism.

4. That she could survive the extreme loss of sleep, and remain so long in an upright position.

There are many other unique points connected with this case, that space, time and your patience forbids me to note.

SUBLUXATION OF THE RADIUS.

Dr. Robert T. Morris, of New York, has contributed a valuable

article to the New York Medical Journal on the mechanism of the injury known as Subluxation of the head of the radius. Dr. Morris obtained the arms of a child four months of age and those of another child fourteen months old, and by a series of ingenious experiments determined the mechanism and anatomical features of this injury. He concludes that it consists in a separation of the head of the radius from the capitulum by the interposition of the orbicular ligament. If reduction cannot be accomplished the arm should be fixed in an extended position, which gives the best opportunity for the loop of ligament to escape destruction from the subsequent alterations of structure.

McMURTRY COMES TO LOUISVILLE.

Dr. L. S. McMurry, formerly of Danville, returned from

Europe last month and has settled down to work at 233 West Chestnut Street in this city. For several years past, Dr. McMurry has given the greater portion of his time and attention to gynecology and abdominal surgery, and is widely known as an earnest and successful worker in that great and growing department of practice. His visit to Europe was to perfect his knowledge in his specialty, and henceforth he will devote himself exclusively thereto.

PATHOLOGY AND HYGIENE.

TUMORS OF THE URETHRA,

BY

RICHARD H. HARTE,

M. D.

Read to the Philadelphia
County Medical Society.
Stated Meeting, May 22,
1889.

The meagre data to be found in the literature on this subject has induced me to report the two cases which have come under my charge. Those instances which have been recorded have been described under the generic term

of caruncle. Owing to the advancement in pathological knowledge, and the greater facility with which we now explore these formerly hidden passages, it devolves upon us to give greater accuracy of definition. In consequence I have undertaken to relegate the tumors to the class in which they should be embraced.

While tumors of the female urethra have frequently been subjected to microscopical study, it happens that all those occurring in the male canal have only been microscopically described. Owing to the similarity in structure of tissue, it can but follow that those growths of like appearance and similar history shall be similarly constituted. I believe with the continued improvement of instruments for urethral study, and the consequent greater attention devoted to this surgical specialty, many other conditions will be brought to light which are now known as stricture, gleet, irritable urethra, and so forth. To instance this it is but necessary to note the wonderful proportions the study of laryngoscopy has assumed since the introduction of the throat mirror and its accessories. Prior to the middle half of this century the recorded cases of laryngeal tumors could readily be counted on the fingers of two hands; at the present time laryngologists record their tumor cases by the scores.

New growths in the male urethra are of rare occurrence, and their recognition dates back to 1718, when Pascal described two in

his *Treatise on Gonorrhœa*, which occurred in soldiers. Arnaud,¹ in 1763, cites a case where there existed a polypoid excrescence an inch long, of red color, and projecting from the urethra. Velpeau² makes mention of a small growth occurring in the fossa navicularis which was mistaken by M. Thaudière for a small pea-shaped cancer, which the latter had excised and cauterized. Hunter met with two cases, the specimen of one now being in the Museum of the Royal College of Surgeons. Dessault never met with one case in his whole experience. Norman³ cites one occurring in the practice of Mr. Erichsen, the growth being inside the urethral orifice of a nodulated raspberry-like appearance, the size of a cherry-stone; it bled freely. Sir Henry Thompson⁴ mentions a similar case occurring in his practice. In this instance the tumor was situated in the fossa navicularis. He describes also the specimen of a large polypoid growth about nine lines in length by three or four in width, at the junction of the membranous and prostatic portions of the urethra, which gave rise to symptoms of stricture during life. Mr. Holmes⁵ cites a somewhat similar case occurring in a man aged fifty-four. He is inclined to consider these growths as a sort of intra-urethral wart, of red color, vascular, and very ready to bleed. Gross⁶ describes a case where he exposed a growth by laying open the dorsum of the penis as far back as the glans, exposed and examined a small nodular tumor about the size of half a pea, on the floor of the fossa navicularis.

Urethral growths have excited much greater interest in the female, especially since the more complete and thorough description by Clark⁷ in 1814. The most important of the urethral growths thus far described are the so-called vascular tumors and polypi. These may vary in size from a

millet-seed to a hazel-nut. Their seat is usually in or about the fossa navicularis, although polypi have been noticed along the course of the urethra, as far back as the prostatic portion. In the female they usually occur near the meatus. As a rule only one tumor is present, yet two or more have occasionally been met with.

Pascal in two post-mortems (*loc. cit.*) found the urethra studded all along its course with fungous callous excrescences, a condition which he thinks evidently caused the deaths.

Considerable diversity of opinion exists in regard to the character and appearance of urethral tumors. They are variously described as being of a pale cherry or raspberry hue, and again as having a deep congested color. Their surface is raised above the surrounding mucous membrane, their shape conical or ovoidal, with broad base, or pedunculated. They are exquisitely sensitive and bleed upon the slightest irritation. Their growth is usually slow, after they have attained a certain volume. They frequently advance in an imperceptible manner or remain stationary. Their origin is commonly insidious, and hence a considerable time often elapses before the patient is aware of their presence. Gross says that concerning the exact cause of these tumors nothing whatever is known. Velpeau thought they were produced by gonorrhœal contagion.

Specific urethritis is much more frequent in the male, and this being the case, we should naturally expect to find these growths predominate in the male urethra. This, however, is not the fact, the female urethra, although seldom the seat of a specific inflammation, nevertheless affords a site for a large number of vascular tumors. Sir Henry Thompson thinks that the granular condition following, and often behind, old strictures is a predisposing and exciting cause.

Urethral growths appear to be confined to no particular period of life. Mr. Holmes

¹ Arnaud, 1863, Observation, 10

² Velpeau, Operative Surgery, Mott and Blackman, vol. iii. p. 742.

³ Norman, London Medical Journal, vol. i. p. 52.

⁴ Thompson, Stricture of the Urethra, 3d ed. p. 87.

⁵ Holmes, System of Surgery, vol. iii. p. 225.

⁶ Gross, On the Urinary Organs, 2d ed. p. 810.

⁷ Clark, Diseases of Females, Part 1. p. 264.

cites one occurring in a man at fifty-four. Mr. Erichsen's case, reported by Norman, appeared in a man of twenty-one years. Winckel¹ has noticed them in female children shortly after birth.

Much confusion seems to exist about the classification of these growths. This is not to be wondered at when it is evident that an attempt is made to describe different tumors under the same heading. Undoubtedly two distinct varieties of tumors may be found in the male urethra, the fibrous polypi and the papillomata. The fibroid polypi found in the old, and usually seated far back in the urethra or prostate, are of rather a pale pink or pearly color. They spring from the submucous tissue, with a well-marked pedicles, and usually occur singly; they are especially sensitive, and have little tendency to bleed except when ulcerated.

The papilloma are by far the most common, occupying all positions in the urethra, but preferably the region about the fossa navicularis. They vary much in size, character, and appearance, sometimes being like the hard fibrous polypi, sometimes the soft cherry-colored angio-mata. They are usually found in the early periods of life, although occurring at all ages. Their color varies from a light pink to a deep raspberry hue. They may assume the shape of a polypus with a narrow pedicle, or a hard nodular growth, slightly raised above the surrounding mucous membrane; or again, be soft, flaccid, and present the appearance of an erectile growth. At times they do not seem to possess any more sensation than the surrounding mucous membrane. This is, however, exceptional; as a rule they are exceedingly sensitive and painful.

Mr. Paget² regards the microscopic structure of polypi as composed of delicate fibro-cellular tissue, with fine undulating and interlacing bundles of filaments; bloodvessels enter their bases and ramify with wide-spreading branches, and accompanying them

are the large or more opaque bundles of fibro-cellular tissue. Small cysts of synovial-like fluid sometimes exist within them.

With reference to the papillomata, Mr. Paget observes that these growths may be occasioned by an hypertrophy of the normal papilla, or may be a new formation in the part. In their general form and arrangement they have many points of resemblance, but on an enlarged scale, to the papillæ, which in various localities constitute natural projections from free surfaces. Their basis substance is formed of connective tissue, which is continuous with that which normally exists in the part; while the free surface is covered by epithelium which may vary in thickness, and in the number of its layers. Bloodvessels and nerves enter into the centre of the papillæ. When a number of growths become aggregated they form a tumor of some size. It sometimes happens that the vascular tissue is so considerable that it extends throughout, even to the free surface, and the whole outgrowth seems like a vascular plexus. If a single loop be examined it will appear as if the epithelium were in contact with the capillary wall. G. Simon³ found one removed from a female urethra to be composed microscopically of vascular loops, which had proliferated among the papillæ and connective tissue layers of the mucous membrane, its surface being covered with pavement epithelium. Wedl⁴ also found enormously developed and tortuous vessels. He compared them to the vasa vorticosæ of the choroid, and designated them as dendritic papillary connective tissue—new growths with thin walls.

These tumors being extremely sensitive, nerve filaments have been sought for in them. Verneuil was unable to find any, but Dr. John Reid,⁵ who examined one for Simpson, found a rich distribution of nerve filaments in it. It can be readily understood why the broad and thin-coated vessels

¹ Winckel, *Cyclopædia of Obstetrics and Gynecology*, vol. x. p. 52.

^{3, 4} Op. cit. (Winckel.)

⁵ Simpson, "Diseases of Women," vol. iii. p. 276.

bleed profusely, often on the slightest touch. These papillomata in other parts of the body have a tendency to recurrence, if not entirely eradicated, and such has been the result in the few cases that have been noticed in the male urethra. The suffering which attends these tumors at times is so great that it renders the patient utterly miserable and unfit for the ordinary duties of life. The pain is much increased by walking, horseback exercise, micturition, and sexual intercourse.

The diagnosis may often be secure, simply from the difficulty in satisfactorily exposing and exploring the urethra. These growths may be mistaken for stricture, or the hard little irregularities following gonorrhœa. It sometimes happens in using the catheter that a small polypoid growth finds its way into the fenestra and is thus torn away from its attachment. Its position may be located by means of the olive-pointed bougie, aided often by the patient, who may complain of one particularly sensitive point. When the growth is in or near the fossa navicularis the mucous surfaces may be brought into view by means of a small urethral or an ear speculum, or an extemporized one made of two hairpins forced into a small cork at right angles to each other, and the canal illuminated by means of a mirror. When the seat of the tumor is located deep in the urethra, the urethral endoscope, if skillfully used, may be of great service in making or verifying a diagnosis.

The treatment of these tumors is strictly local. Astringents, iodine, and caustics have only a pernicious effect. Complete either with knife, scissors, Paquélin cautery, or wire loop is all that should be attempted; the removal by means of a ligature is both awkward and painful, and is seldom effectual. When these growths are situated in or near the meatus they may be snipped off by scissors, or if of a polypoid character, removed by means of a wire loop or snare.

The following is a report of the two cases

of papilloma that have occurred in my hospital practice:

J. A. S., aged forty, was admitted to the Pennsylvania Hospital on June 5, 1881. For some time past he had been suffering from a particularly tender and sensitive spot near the orifice of the urethra. The pain was always exaggerated when he attempted to urinate. He also had noticed that the calibre of the stream was becoming much reduced. About ten days before his admission he had consulted a surgeon, who told him that he was suffering from a stricture which required a slight operation. To this procedure he submitted. Immediately after the operation (internal urethrotomy) he began to bleed freely from the urethra. The bleeding was controlled with some by introducing a catheter and by making pressure by turns of adhesive plaster. In a short time these were removed, but the bleeding immediately began again, necessitating a similar application in order to control the hemorrhage. Every subsequent attempt at removal met with a like result.

He determined to seek other surgical advice and came to the hospital. On admission he presented a blanched and anæmic countenance, with all the symptoms of a person who had been subject to exhausting hemorrhage. A No. 12 English catheter was retained in the urethra by strips of adhesive plaster, making pressure on the greater portion of the penis behind the glans. The patient protested against having the plaster removed, saying that as soon as it was loosened the bleeding would recur. Thinking he was unnecessarily nervous, I, without hesitation, removed both catheter and straps, with the hope of finding and controlling the bleeding point. No sooner, however, had this been done than a bright stream of arterial blood flowed from the meatus. A large metallic catheter was introduced, the patient complaining of great pain a short distance from the orifice of the urethra. Pressure was applied as advised in urethral hemorrhage, but failed

utterly to control the bleeding, except when sufficient to interfere with the circulation of the entire organ.

By a little manœuvering and pressure over the tender point, which appeared to be on the floor of the fossa navicularis, the hemorrhage could be controlled. Having determined that this was the site of the hemorrhage, and the condition of the patient necessitating immediate interference to prevent the bleeding, operative procedure was begun. An extemporized tourniquet was placed on the penis. The patient was etherized, and the urethra more carefully explored by means of an olive-pointed bougie, which revealed a marked constriction about an inch from its orifice. In order to expose it, the urethra was laid open on a grooved director, as far back as the corona, which disclosed a dark cherry-red nodular growth, about the size of a split pea, and very sensitive. The patient flinched when touching this point after other reflexes were abolished. On loosening the tourniquet the blood spouted from a fair-sized vessel in the centre of the growth. Any attempt to ligate the bleeding point was fruitless, owing to its density. Astringents were also useless. The actual cautery was then resorted to, and vigorously applied until the entire growth was destroyed. The hemorrhage was completely controlled. The wound was brought into apposition and closed with two hair-lip pins. A soft, flexible catheter was introduced into the bladder and allowed to remain *in situ* forty-eight hours.

The wound united by primary union, and on the third day the pins were removed. A liberal diet and full doses of iron and quinine soon brought color to the blanched, and on the eleventh day the patient desired to return home, saying that he felt perfectly well, free from pain, and experienced no difficulty whatever in urinating.

The second patient presented himself at the Out-Patient Department of the Pennsylvania Hospital in 1885.

For some months past he had noticed a particularly painful and sensitive point a little within the urethra, the pain always being increased upon attempted micturition. He had also noticed that the calibre of the stream was becoming much reduced. He had consulted a physician who, after an examination, informed him that he was suffering from a stricture of the urethra. He had ordered him a short straight metallic bougie, with directions how to use it. Every attempt to introduce it produced so much pain that he was forced to abandon its use, and determined to seek other advice.

He presented the physique of a strong, well-developed man, of good color. Penis of normal size, and prepuce well retracted. A sensitive point was discovered on digital examination, directly under the corona. An Exploration with the bougie made apparent an obstruction of some size about the fossa navicularis, so sensitive that it was impossible to satisfactorily explore it. Ether was administered, and, assisted by Dr. D. B. Birney, the penis was laid open on the dorsum, sufficiently to expose the floor of the fossa navicularis. A dark cherry-colored growth, about the size of a half pea, was exposed, with a smooth mucous covering, situated on the floor of the fossa navicularis, and raised some distance above the surrounding tissue, with no tendency to bleed, but excessively sensitive. On the slightest irritation he would evince pain after all the other reflexes were abolished. The growth was thoroughly destroyed, as in the first case, with the actual cautery, and the wound carefully approximated with two hair-lip pins. These were allowed to remain two days, the wound uniting *per primam*. The patient expressed himself as greatly relieved, experiencing no pain whatever, nor difficulty in micturition.

When the character of the growth is similar to the two cases cited, which are decidedly the most troublesome and annoying, the only procedure to be employed is

to lay the penis open on the dorsum, cutting through the spongy portion from the urethra out. The hemorrhage is controlled by a small rubber cord tied around the base of the penis. This incision should expose the mucous surface as far back as may be deemed necessary; the growth may then be enucleated by any of the above-mentioned plans, care being taken to remove sufficient surrounding tissue to guard against recurrence.

The wound on the dorsum of the penis (after washing with a solution of bichloride of mercury, 1 to 2000) may be approximated by means of hair-lip pins, and a soft English catheter placed in the bladder. My last case did quite as well as the former, although the catheter was dispensed with. The parts being very vascular the wound heals quickly, and usually by first intention. The pins can be removed on the third day, and on the fourth or fifth day the patient will be practically free from all further trouble.

DISCUSSION.

Dr. George E. de Schweinitz: The author of the paper has stated that tumors of the male urethra have not been examined microscopically. Five years ago I reported to the Pathological Society of Philadelphia a case in which such examinations were made, of which the following is a brief history:

The patient, a young man, had contracted gonorrhœa, which was unusually severe and prolonged in its course, but which had subsided with the exception of a few drops of pus each morning. This condition persisted so constantly that the suspicion was aroused that there might be a tumor of the urethra. By means of an improvised speculum constructed from a carefully cleaned tin blow-pipe, a small cherry-red tumor was discovered one inch from the meatus. This was removed with the ordinary polypus forceps, when two other tumors, one the size of a small pea, and

the other as large as a split pea, came into view, and were similarly removed. A coarse examination revealed the appearance of a dendritic growth. Thin sections under the microscope demonstrated the structure of a papilloma—that is, a vascular connective tissue capped with stratified pavement epithelium. It will be noticed that this examination accords with such as have, in many instances, been made of tumors removed from the female urethra.

New growths of the male urethra are usually reported to be of rare occurrence. I think they would be more frequently found if search for them was more often made. This point has been brought forward by Belfield, of Chicago, who has, in a number of instances, found them upon the post-mortem table, an experience which, no doubt, would be repeated were this portion of the anatomy more frequently examined systematically.

The point in regard to the extreme sensitiveness of these vascular tumors of the male urethra has been raised in the paper of this evening. This fact has, in times past, led pathologists to search for nervous distribution in these neoplasms, and in one or two instances the presence of nerves has been demonstrated. Now it is a well known fact that extremely sensitive tumors may be absolutely without nervous endowment, or at least, that thus far nerves have not usually been found. Some years ago, I made numerous examinations in the pathological laboratory of the University of Pennsylvania in order to determine if possible, the presence of nerves in various forms of morbid growths. Their existence was only rarely noticed. The so-called "neuralgic tumors of the skin," neuralgic tumors of the breast, and various forms of painful growths, either malignant or benign, are not infrequently without demonstrable nervous endowment. The pressure of the tumor upon surrounding structures, in most instances, determines the amount of pain, and not the presence within the neoplasm

itself of nerve filaments. I should say that in the tumors of the male urethra which I removed and studied microscopically, it was, of course, not possible to examine the base of the growths. In structure they were papillomas, and their exciting cause seemed to have been the prolonged attack of gonorrhœa.

Dr. Max J. Stern: It is reasonable to suppose that in tumors of like character, and occurring in the same situation, the pathology should be the same. I agree with Dr. deSchweinitz that these tumors are probably more frequent than is commonly supposed. On the post-mortem table the opening of the urethra is usually omitted, and even in dissections it is not common to lay it open. In regard to the causation of these tumors, I think that there is very little doubt that polypi chiefly result from granulations behind strictures. The polypi are formed in the same way as in other parts of the body. After purulent inflammation in the ear or nose, polypi are liable to spring up from resulting granulation tissue, and flourish luxuriantly.

Dr. J. H. Packard: In regard to the operative procedure adopted in these two cases, I would like to ask, whether laying open the urethra from the dorsum is preferable to incision below, where the canal is so close to the surface? It seems to me that in the former method there is greater risk of troublesome bleeding, especially if the growth were situated so far back as to make division of the corpus cavernosum necessary for its exposure. And I should suppose the accurate coaptation of the large surfaces would be difficult, so that deformity of the organ might remain.

These suggestions are theoretical; the only instances of these urethral tumors which have come under my own notice have been in women, where of course, the operative procedure is very greatly simplified by the short and dilatable urethra. I have no doubt that these tumors are often overlooked.

BOOKS AND PERIODICALS.

A TREATISE ON HERNIA.

The radical cure by the use
of the buried animal suture,

BY

HENRY O. MARCY,

M. D., L. L. D.

Surgeon to the Private Hospital for Women, Cambridge, etc; Boston, Mass.

1889: George S. Davis, Detroit, Mich.

This little book offers to the profession the results of eighteen years' special study of the subject, experimentally on inferior animals and clinically in the human subject. Dr. Marcy is so able and painstaking in his experimental researches as to make what he

here offers especially valuable to the reader, who may chance to become responsible for the management of a person with hernia.

Dr. Joseph H. Warren, of Boston, published six or eight years ago a treatise on hernia, which, at the time, well nigh exhausted the subject. Since then Dr. Marcy has reached conclusions by experimental research so valuable in their nature as to warrant the publication of an entirely new treatise.

In this work the methods of other operators are calmly discussed, and the author's own views duly set forth. The pleasing, not to say graceful, style of Dr. Marcy's diction makes his facts appear all the more attractive to the student, whilst the experienced surgeon will find the work so carefully prepared as to make a delightful blending of the ideal and the real.

A TRIFLE LATE.

This issue of PROGRESS has been delayed by the Assignee's Sale of the Rogers Tuley Company's printing establishment. Hereafter the number will be issued promptly in accordance with the improved facilities of publication. Other changes of an important character will be announced in the July number, which will, it is hoped, be pleasing to that already large and constantly growing body of practitioners, tenderly termed "our readers."

CORRESPONDENCE AND SOCIETIES

OBSTETRICAL
SOCIETY OF
PHILADELPHIA.LAPAROTOMY FOR IN-
TESTINAL OBSTRU-
TION.

BY

B. C. HIRST,

M. D.

Stated Meeting Friday, May
3, 1889. DR. THEOPHILUS
PARVIN, presiding.

The following case is reported, not because it is an especially rare and interesting one, but because it so clearly emphasizes the importance of early operative interference whenever indubitable symptoms of intestinal obstruction manifest themselves.

Mrs. F., æt. 45; seen in consultation with Drs. Prendergast and Ziegler; she has always been constipated; about five days before I saw her, she had taken a number of aperient pills, as she had not had a passage for some days before. The medicine was without effect in moving the bowels, but caused intense abdominal pain. Three days afterward stercoraceous vomiting began. The gentleman in charge of the case had injected large quantities of water into the bowels without result; no purgative medicine, however, had been administered. We finally agreed to try an injection of glycerine. This was followed by the evacuation of quite a large portion of well-formed fæces. Hoping that we had at last overcome the obstruction, concentrated solution of salts was administered in small doses frequently repeated. This had had barely time to act when promise fæcal vomiting again appeared. An operation was then, of course, determined upon and performed late at night, with the valuable aid of Dr. Jos. Price's technical skill and good advice, assisted by Drs. Prendergast and Ziegler. The small intestine was occluded by a mesenteric band so tightly that not a particle of fæces could go through. The proximal portion was enormously distended and congested; the distal portion for a length of eight inches was almost black in color, and looked already gangrenous. The band was easily divided. The distended gut was

punctured, and a basin full of liquid fæces evacuated. The opening was most carefully sewed up. The discolored portion of the gut was watched for about twenty minutes, while the circulation gradually returned to it, and its appearance much improved. The abdominal wound was then closed and dressed. The whole operation, including the time consumed in watching the strangulated portion of intestine, lasted but thirty minutes. The woman's condition was fairly good afterward, but she soon began to sink, and died of exhaustion thirty-six hours later. The case was complicated by the worst nurse, in the person of a religious sister and relative of the patient, that I ever came in contact with.

Had the operation been undertaken as soon as stercoraceous vomiting appeared, in all probability the woman's life would have been saved. The delay, however, under the circumstances, was natural, and the belief that the obstruction had been overcome seemed justified. The lesson, I think, that this should teach—the lesson, at least, that it has taught me—is to open the abdomen as soon as stercoraceous vomiting occurs; the operation may occasionally prove unnecessary, but then little harm will have been done; more often it will rescue the individual from impending death.

Dr. H. A. Kelly—I recently operated upon a similar case *in extremis*. An old woman had had stercoraceous vomiting for many days, and was prostrated with a tympanic abdomen, a very rapid pulse, and a deeply furred brown tongue.

I found, at the abdominal section, that the small gut was contracted down into a small cord from the ileo-cæcal valve eighteen inches up.

A prolonged, waiting, do-nothing policy in the hands of an ignorant practitioner had done the work.

If the operator is to give himself and the patient a chance, these cases must be seen early.

Dr. John B. Deaver.—I have seen a

number of cases of obstruction of the bowel, and it is astonishing with what freedom physicians will administer aperients in these cases. Dr. Hirst speaks of giving concentrated solution of salts. I recently saw a case where the physician had given six drops of croton oil, and wondered why he did not get any movement of the bowels.

Treves, who has written the best article on this affection, plainly tells us that there are cases which call for large doses of opium from the commencement.

In regard to stercoraceous vomiting, I do not think that it is safe to wait for this symptom. We know that the most common form of intestinal obstruction, in the adult at least, is strangulation by a band. The next most frequent form is volvulus, and the most common seat of volvulus is at the sigmoid flexure. In these cases it is rather the exception to have stercoraceous vomiting until the patient is in *periculo mortis*. In the majority of cases where you have obstinate vomiting not allayed by simple measures, and with this constipation and the evidences of depression, these symptoms will warrant the surgeon in operative interference.

Dr. J. Price.—I am surprised to hear a surgeon say that there is ever an indication for opium in bowel obstruction. I have seen a large number of these cases, but I have never recognized an indication for opium save in a dying patient. It is just these large doses of opium which render the surgeon absolutely powerless. Scarcely a surgeon dares work after a large dose of opium has been given. He is called to see a patient where the physician suspects obstruction. He finds a comfortable patient with all the symptoms masked. It would be impossible to induce such a patient to submit to operation, the only thing that will save his life. Diagnosis should always be made, where possible, before administering an opiate.

The case reported by Dr. Hirst has many

points of interest. It was unquestionably a chronic case of obstruction. The bowels were filled with fæces and gas. It is in these cases where the patients are dying from fæcal poisoning and shock, that we must minimize every detail in our operations. They can not stand a prolonged operation and manipulation of vital viscera like the intestines. Nor will the condition of the viscera permit the introduction of sutures. The suture tracts will become gangrenous. The operation must be performed as quickly as possible. Sometimes you can do nothing more than make an artificial anus with drainage of bowel contents. In this way you may save life and be able to perfect the cure at a later period. The methods of Senn, and one or two gentlemen in New York, by means of disk and ring methods for forming intestinal anastomoses, are valuable and rapid, and will no doubt contribute much to perfect intestinal surgery.

Dr. J. C. Da Costa.—With all due reference to want of success Dr. Price has had with opium, I may say that Mr. Treves is not entitled to the credit of this treatment. If the old editions of Gross' surgery are examined, it will be found that Prof. S. D. Gross recommends opium in intestinal obstruction, and states that a number of cases have recovered under it.

Dr. J. M. Baldy.—With all due respect to Dr. Gross and to Mr. Treves, I do not think that we need be proud of the treatment of intestinal obstruction by opium. We know that intestinal obstruction has a greater mortality than any other abdominal disease. The mortality is simply frightful. Treves mentions two thousand cases occurring in England alone. The use of opium in intestinal obstruction tends to increase the distension and obstruction already existing; and if the degree of obstruction was such that it might have been relieved, it spoils the chance. In addition no one can make a correct diagnosis with a patient stupified with opium.

I agree with Dr. Deaver that we ought not to give purgatives. If injections will not relieve the case quickly, we should not wait beyond obstinate vomiting, and stercoraceous vomiting should be absolutely the last symptom that we should wait for.

Dr. John B. Deaver.—With all due respect to Dr. Baldy and Dr. Price, I can not agree with them. This is an important and practical point, especially important to the young practitioner. Opium is called for until the diagnosis is made. In all of these cases of intestinal obstruction, it is difficult to make the diagnosis. We know that paroxysmal pain of intestinal obstruction is due to peristalsis. We know that opium is not the cause of the distension; this is due to the obstruction. Where we have active obstruction, any form except *ileus paralyticus*, opium is of service. Whereas I am in favor of the administration of salines in ordinary abdominal surgery, I can not think that they are called for until we have made up our mind whether or not we have intestinal obstruction.

Dr. J. Price.—I have a case which I think will demonstrate the mistake of Dr. Deaver. Day before yesterday my brother was asked to see a patient in whom he suspected intestinal obstruction. He forbade absolutely the administration of opium for the relief of the paroxysms of pain, and gave large enemata. He obtained nothing more than a colic movement. In less than six hours fecal vomiting occurred, and three or four hours later he did a section for the relief of a strangulated bowel. The bowel was almost gangrenous at points. Salines were administered and four movements followed. The temperature is now normal. The pulse under 90. This was an ideal case, and demonstrates the importance of a clear diagnosis and early work before the patient is dying of fecal poisoning, collapse, and peritonitis. It matters not who first used opium, the cases all died just the same.

Dr. Barton C. Hirst.—I agree with the

criticism in regard to the administration of purgatives in these cases. We did not give the concentrated solution of salts until we thought that the obstruction had been relieved. It was given with the view of getting rid of the accumulated feces. If there had been any idea that obstruction still existed, it would not have been employed.

Charles Meigs Wilson.—Mary Mathews, a native of Ireland, 30 years of age, unmarried, pregnant with her first child, was admitted to the receiving ward of the Philadelphia Lying-in Charity, Dec. 29, 1888. At the time of her admission the membranes had ruptured, the os uteri was dilatable, and the customary prodromic symptoms of commencing labor were present. On the evening of the 30th of December active labor-pains commenced, and on the afternoon of December 31 she was delivered, after a normal labor, without instrumental aid, of a living child weighing six and one-half pounds. The placenta and membranes came away intact. There were, however, two slight abrasions, involving only the mucous membrane of the vulvar orifice, but no laceration of the perineal body. The abrasions were carefully dried after the labor was completed and touched with a ninety-five per cent. solution of carbolic acid. The hair surrounding the vulvar orifice was carefully cut away. The case was one thought to be free from any likelihood of septic infection. There was present at the time of her delivery no septic case in the house—all the temperatures of the other puerperal convalescents being under 100° F. The subsequent ascertained history of the case developed the fact that she had had a purulent gonorrhoea discharge during the last five months of her gestation. Upon her admission to the hospital she was given the customary warm bath and a vaginal injection of a litre of a $\frac{1}{2000}$ corrosive sublimate solution. The vaginal injection was repeated when active labor-pains commenced.

The usual rigid aseptic precautions were faithfully followed out by my resident, Dr. Francis Weidner, after her labor. She had no rise of temperature until the evening of the third day, when, without chill or chilly sensation, her temperature went up to $102\frac{2}{5}^{\circ}$ F. The uterus was at once curetted with negative result and irrigated with two litres of a $\frac{1}{2000}$ corrosive sublimate solution, and the patient placed under the influence of antipyrine. This treatment seemed to modify the temperature, which varied for the next seventy-two hours between 99° F. and 101° F., after which it vibrated between the normal point and 100° F. On the morning of the fourteenth day a small indurated mass was noticed by Dr. Weidner in the right inguinal fossa. Counter-irritants were applied and hot fomentations, and the patient placed under the influence of quinine and whiskey in large doses. The swelling increased in area day by day. On the morning of the seventeenth day of puerperal convalescence, the woman was suddenly seized with a violent chill lasting fifteen minutes, and followed in half-an-hour by a rise of temperature to 104° F. I saw her about an hour after the chill had occurred. She had a worried, anxious look, was in a colliquitive sweat, and presented all the evidence of profound septic intoxication. With the assistance of my friend, Dr. Noble, who agreed with me, upon inspection of the case, that we had either a tube or an extra-peritoneal depot of pus which must be evacuated, I at once had the patient prepared and put upon the operating-table. Vaginal examination conjoined with abdominal palpation revealed extensive induration of the right iliac fossa, which was rightly judged to be an extra-peritoneal abscess. An incision midway on a line drawn from the anterior superior process of the right ilium and the umbilicus, one inch in length, was made until the peritoneum was reached. Careful palpation failing to reveal fluctuation through the exposed peritoneal surface, the wound was

carefully closed, and an incision five inches in length was made into the abdominal cavity on the median line. The hand carried into the abdominal cavity through this incision at once revealed a thickened oviduct on the right side, adherent at its distal end to the abdominal peritoneum, and an immense collection of pus behind the abdominal peritoneum, to which the fimbriated end of the Fallopian tube was attached, and which seemed to be encapsulated in the sheath of the iliacus internus muscle. With the hand in the abdomen as a guide, the abscess was evacuated through an incision made just in front of the anterior and superior spine of the ilium on the right side; about one litre of pus, with a distinctly fæcal odor was evacuated; the greatest care was taken to save the abdominal wound from contamination with the pus as it flowed from the abscess cavity. The abscess track was carefully irrigated with a $\frac{1}{1000}$ solution of corrosive sublimate and drained with a large glass drainage-tube. The abdominal wound, after a careful inspection and toilet of the peritoneum, was closed without drainage. The wounds were dressed with the modified Keith's dressing. The patient made a protracted and slow convalescence, being discharged from the hospital March 6. She reported at the hospital again in three weeks' time, and so great had been her improvement, and so rapid her convalescence, that neither my colleague, Dr. Noble, nor myself recognized her. Undoubtedly she had had a septic metritis following her delivery, dependent, possibly, upon the presence, of gonorrhœal pus in her vulvo-uterine canal, giving rise to septic salpingitis with adherent inflammation of the fimbriated end of the Fallopian tube on the right side to the abdominal peritoneum, and subsequent formation of a septic abscess in the sheath of the right iliacus internus muscle. Of the wisdom of the exploratory abdominal incision there can be no doubt, as it made the diagnosis definite and clear, and indi-

cated the best method of opening the abscess. As was demonstrated by the subsequent steps of the operation, any attempt to open the abscess by incision through the abdominal wall, without the light given by the abdominal incision, would most likely have allowed the pus to escape into the abdominal cavity—a disaster which if discovered would have tenfold increased the danger to the patient, even if abdominal drainage had been resorted to, and which, as would most likely have been the case, undiscovered, would have led inevitably to the patient's death. To my mind, the case is full of instructive lessons. If in doubt as to whether a post-puerperal septic abscess be extra or intra peritoneal, I think it the duty of the accoucheur to verify his doubt by the simple expedient of abdominal exploratory incision, which enables him definitely to decide, and which adds little or no measure of danger to his patient. If, also, a case presents the symptoms such as mine did, the physician may rest assured that pus is present, and instead of temporizing delay, he must realize that the safety of his patient depends on prompt recognition of her condition and the speedy evacuation of the pus.

Dr. Wilson also reported an intra-ligamentous cyst.

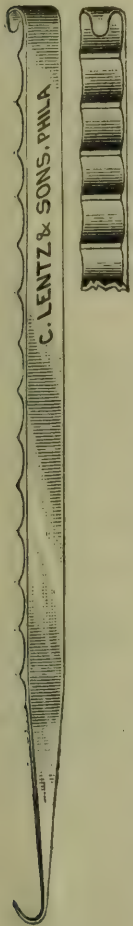
This specimen was removed from a woman named Mary W., æt 32, unmarried and a native of Scotland. She commenced to menstruate at 13 years of age, and was always regular. She had never submitted to coitus. Six months before examination, she first noticed a slight tumor the size of a goose's egg in her right side. A careful bimanual examination under ether revealed a large cyst on the right side of the uterus, and apparently situated in the broad ligament. The diagnosis of intra-ligamentous cyst was made by my colleague Dr. Noble and myself, he using the alternate diagnosis of fibrocystic tumor of the uterus. This cyst had grown rapidly, as in my experience all intra-ligamentous cysts do. Five days

after admission, and ten days after the last menstrual flow, the abdomen was opened by a small incision one and one-half inches in length. The diagnosis verified the broad ligament incised on its anterior surface, and the cyst easily removed by first aspirating its contents and then *sponging* out the empty sac from its incasement in the broad ligament. The case offered no difficulties, and was principally remarkable for the ease with which the cyst was enucleated. But two or three arterial twigs required pressure with the hæmostatic forceps, and but one was tied with a ligature. This case is reported in order to show with what facility these cysts may be diagnosed and operated upon. Also to show the advantage gained in the freedom from hemorrhage where the sac is separated from its attachments by the adhesions being gently sponged away. This method has the additional advantage that hemorrhage can be readily and instantly detected by its employment, and the dangers of the operation thereby materially decreased. The woman made an excellent and uninterrupted recovery, the suture being removed on the sixth day, and the woman discharged from the hospital on the twelfth day. No drainage was employed in this case. In both cases I am thankful to have had the assistance of my colleague Dr. C. P. Noble, and my friend and resident doctor, Francis Weidner.

Dr. Barton C. Hirst.—I had a case presenting nearly the same features as that reported by Dr. Wilson, and in which I adopted the same procedure. I opened the abdomen and evacuated the abscess externally at the point found most convenient. I could get no history, and do not know whether the abscess followed confinement or not, but I think not. The case made complete recovery. I agree with the recommendation of abdominal section to determine the proper point of opening in these large abscesses about the lumbar muscles. If I had attempted to open this abscess without previous abdominal section, I should, very likely,

have opened the peritoneal cavity. There is usually, too, some doubt as to the diagnosis of these cases. In the one just referred to, it was uncertain whether the tumor was an osteo-sarcoma of the pelvic bones, or a deep-seated abscess; the section cleared up all doubt.

Dr. H. A. Kelly exhibited Eastman's Clamp Forceps for securing the broad ligaments in vaginal hysterectomy, and made some remarks upon the simplified technique of the operation in the use of clamps instead of ligatures.



Also a new Corrugated Tenaculum designed to afford a third hand to the operator. This tenaculum, which I exhibit for the first time this evening, has opened up new avenues for me in the successful diagnosis and treatment of abnormal pelvic conditions.

Diagnostically, it is of value in bringing the uterus down towards the pelvic outlet, displacing all structures attached to the uterus in a downward direction, clearing the hollow of the sacrum for bimanual palpation.

This is effected by holding the cervix down near the vaginal outlet by means of this tenaculum, *with the same hand which is being used in vaginal and rectal palpation*, while the free abdominal hand assists in palpating and bringing the structures to be questioned, within reach.

The tenaculum made for this purpose is eighteen centimetres in length, and seven millimetres in breadth in the handle.

The end of the handle is recurved into a small, short hook, giving a purchase to the hand for traction.

The other end tapers off into the stout hook, which is caught in the cervix when the instrument is in use.

The handle is flattened on its upper sur-

face which is divided into thirteen shallow gutters, one centimetre in width.

When in use, the hook is guided by the index-finger into the cervical canal, which it enters, where it is firmly fixed by pressing it firmly upwards into the anterior lip of the cervix.

The cervix is then drawn down to the vaginal outlet, and the handle of the tenaculum grasped so that the flat surface rests upon the ball of the thumb, while the tips of the second and third fingers rest on the corrugations, thus holding it *in situ*, leaving the index-finger free for vaginal or rectal palpation.

Where a longer reach is desired for the index-finger, the tenaculum can readily be held between the last joints of the ring and little fingers.

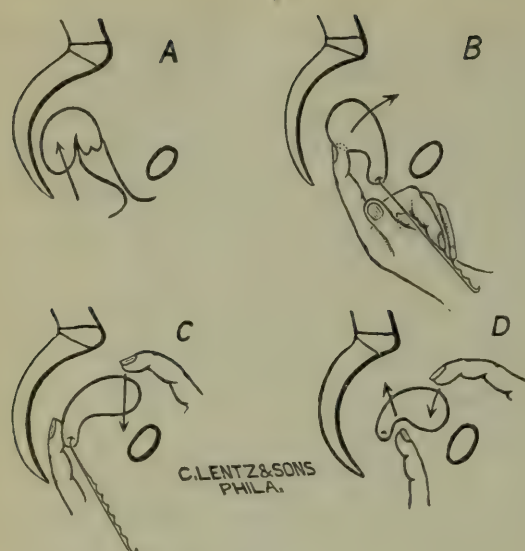
In applying *massage* to the pelvic ligaments and stretching adhesions, the value of the tenaculum is especially great. Very often the only possible means of demonstrating a shortening of one or other ligament is by putting all the lateral, and posterior supports on the stretch, by this means, when soft yielding structures on one side will be found on the other to be replaced by sharp, resisting, sensitive bands.

Retroflexion.—As a simple means of replacement in some cases of retroflexion and retroversion the tenaculum is especially useful.

Here, sometimes, it is absolutely necessary, in order to replace the uterus satisfactorily, to exert pressure and traction in three directions at one time.

The great obstacle in the way of an easy and immediate reposition, in cases of retroflexion where the cervix has not also descended towards the vaginal outlet, is the fact that upward pressure upon the fundus through the vagina or rectum only tends to drive the body of the uterus into the body of the sacrum, as indicated by the arrow in Fig. A.

By catching the tenaculum in the cervix and drawing it down, the uterine body is



straightened out; then holding the tenaculum as shown in Fig. B, and exerting pressure upon the fundus with the index-finger of the same hand introduced into the rectum, the body yields and begins to go upwards in the pelvis, describing an arc around the fixed cervix, sweeping clear of the sacral promontory; at this point the fundus is caught by the other free hand working through the abdominal walls, and drawn forwards (*v.* Fig. C). The lower hand now lets go the tenaculum, and the index-finger is used to push the cervix high up and far back in the pelvis, while the body is brought further forward and forced down. In this way the reposition is satisfactorily and easily accomplished.

VIENNA SURGERY.

Letter from

DR. FAYETTE DUNLAP,
OF DANVILLE, KY.

MY DEAR DOCTOR.

The last sentence of my letter from Munich was a promise of another from Vienna.

My friends in Munich had kindly forwarded letters of introduction to acquaintances in the profession and by them I was received cordially and given the freedom of their clinics and the hospital generally.

So far I have had the most delightful experience and am deeply impressed by the courtesy and kindly greetings extended to wandering doctors by our German confreres.

They contend with each other in hospi-

talities and those polite attentions which makes a sojourn in a European medical centre a green spot in the traveler's memory. A card from Prof. Carl Braun announced that there would be two important operations during his morning hour, and I hastened there in order to get a choice place and avoid the throng of students. The first operation was an abdominal section, the second one on this patient within four months.

The woman, very small in stature, really dwarfed, had a contracted pelvis. Two years before she became pregnant and an abortion was produced in the early months of gestation.

In order to prevent conception Dr. Carl Braun had removed the uterus by Porro's method. Since that time the woman had an intolerable neuralgia in the pelvic regions, and the section to-day was exploratory.

The peritoneum was everywhere thickened and angry schimotic spots found scattered about over the surface. In Douglas pouch was an hæmatocele, which seemed to be the chief source of pain. The mass was broken down by the surgeons' fingers and removed.

A large drainage tube was inserted, and to be left there until pain subsided.

The second operation was a vaginal hysterectomy for carcimon and the methods employed differed in no wise from those of Winckel, Martin, Ezernay and Freund.

The pelvis was packed with candle wick steeped in iodoform and left in for drainage.

The antiseptics used were the sublimate solution, thymal and carbolic acid.

The operator is slow and clumsy, and much valuable time was wasted that could have been saved. I will here repeat a criticism made of the Heidelberg and Munich surgeons, which I hope will be kindly taken. "It is certainly very trying upon a woman, exhausted by pain and disease, to submit to an operation that en-

dangers life, and it would be a merciful thing if they could be anæsthetized before entering the operating room. One cannot but feel for the poor unfortunate who walks in the operating arena, perhaps unaided, and who is compelled to face a throng of curious and often thoughtless students. Furthermore, the hands of the assistants and the napkins, sponges, etc., are bloody, and to one unaccustomed to such sights it is revolting, and particularly discouraging to the one soon to be subjected to the necessity of a capital surgical operation. This could be easily changed and the reputation that the operating room of a metropolitan hospital greatly improved in the minds of the general public. Gentleness and consideration for the feelings of others, especially of the afflicted, are noble, manly qualities, and the members of a human calling should even be in the lead in cultivating them. I saw these patients three days after the operation and both seemed to be going on to speedy recovery. It is not my purpose to enter upon a discussion of the justifiability of such operations as those just recorded, I simply write what I see.

Carl Braun is a large man, slow of speech and slower of movement. I soon observed that he was greatly respected for his attainments and character.

The following day I attended Billroth's clinic and there encountered a great throng of students and visitors. Through the Professors kindness I was given a seat within the railing and had an excellent opportunity to watch the operations step by step. It is not unusual for Billroth to continue his clinic two or three hours, until all material is exhausted.

His first operation was a simple ovariectomy, without adhesions or complications.

In all respects he follows the plan pursued by most operators. No sponges entered the abdomen, absorbent cotton being used liberally. When the tumor presented at the incision, large masses of this cotton were wrung out of warm antiseptic solution, and

pressed against the tumor to hold it firmly and to prevent the escape of the tumour's fluid into the cavity. It will be observed that the hands of the assistants never entered the incision. The pedicle was grasped by two pairs of large flat forceps and tied in sections by stout silk ligature. Antiseptics were used and every possible precaution against sepsis taken.

He next removed a large cystosarcoma of the breast with one sweep of the knife. In making a flap of the skin the tension was greater than it would bear, and the surgeon resorted to a very neat expedient to obviate this difficulty. The ligature was carried through both sides and made to reenter at least one and one-half inches from the first opening, the ligature was then looped over a roller of gauze and the pressure placed upon it. By this method considerable tension was kept up, but it was very certain that the ligatures would not cut through.

I returned the next day and witnessed a resection of the intestine. As the result of a strangulated hernia an artificial anus was formed. The cicatricial tissue was cut away and the two ends united by five ligatures. At least four inches of intestine were lost, but so carefully were the ends approximated that the success of the operation seemed assured. It proved that this prognosis was correct, as the young man soon recovered.

In Breisky's lying-in wards, I had the privilege of witnessing a Cæsarean section. The woman entered the hospital a few hours before, while in the first stage of labor. She had been told by a midwife that the pelvic outlet was too narrow for a natural delivery, or even the necessary manipulation for craniotomy.

It was decided to perform supra vaginal hysterotomy and this was accordingly done.

In no important particulars did it differ from the method usually observed in such cases, and the young surgeon who so promptly brought his skill to the relief of this otherwise hopeless condition, deserves a rich reward for the prompt and intelligent atten-

tion given this patient. The woman and infant were alive four days after the operation.

One is impressed with the vast amount of material at the disposal of the clinics in the Vienna hospital. The specialties are being pursued with enthusiasm by students from every quarter of the globe. The vast army of students and teachers are encountered at every turn within the visiting hours, and there is an air of serious earnestness in the manner of them all. From this centre there is carried to every part of the civilized world scientific medicine and surgery, and to-day Vienna has more influence in molding modern medical science than any other place on the globe.

MORTALITY AND
VITAL STATISTICS
OF THE
UNITED STATES,
DEPARTMENT OF
THE INTERIOR,
CENSUS OFFICE,
WASHINGTON, D. C.,
MAY, 1, 1889.

The various medical associations and the medical profession will be glad to learn that Dr. John S. Billings, Surgeon U. S. Army, has consented to take charge of the Report on the Mortality and Vital Statistics of the United

States as returned by the Eleventh Census.

As the United States has no System of registration of vital statistics, such as is relied upon by other civilized nations for the purpose of ascertaining the actual movement of population, our census affords the only opportunity of obtaining near an approximate estimate of the birth and death rates of much the larger part of the country, which is entirely unprovided with any satisfactory system of State and municipal registration.

In view of this, the Census Office, during the month of May, this year, will issue to the medical profession throughout the country "Physician's Registers" for the purpose of obtaining more accurate returns of deaths than it is possible for the enumerators to make. It is earnestly hoped that physicians

in every part of the country will co-operate with the Census Office in this important work. The record should be kept from June 1st, 1889, to May 31, 1890. Nearly 26,000 of these registration books were filled up and returned to the office in 1880, and nearly all them used for statistical purposes. It is hoped that double this number will be obtained for the Eleventh Census.

Physicians not receiving Registers can obtain them by sending their names and addresses to the Census Office, and, with the Register, an official envelope which requires no stamp will be provided for their return to Washington.

If all medical and surgical practitioners throughout the country will lend their aid, the mortality and vital statistics of the Eleventh Census will be more comprehensive and complete than they have ever been. Every physician should take a personal pride in having this report as full and accurate as it is possible to make it.

It is hereby promised that all information obtained through this source shall be held strictly confidential.

ROBERT G. PORTER,
Superintendent of the Census.

KENTUCKY
STATE
MEDICAL
SOCIETY.

Thirty-fourth Annual Session, held at Richmond, May 8, 9, and 10, 1889.

Acute Traumatic Tetanus was the subject of a paper by Dr. R. G. McChord, of Lebanon. He related some cases, and gave the results of treatment. He considered the bromide of potassium the best of all known remedies.

DISCUSSION.

Dr. L. H. Clarke, of Lexington, said he

had attended several cases of tetanus; none however, recovered. He believed that all cases are due in some way to traumatism. The treatment by means of the bromides is *par excellence*.

Dr. Ap Morgan Vance reported a case following injury of the thumb. Five days

after the injury the patient, in attempting to carry a bucket of water, lacerated the thumb, and soon tetanic symptoms developed. He was given a half dram of the bromide every two or three hours until fully under the influence of the agent. Twice, after he had apparently recovered, the symptoms re-developed, and I had to return to the bromide. He finally recovered.

Dr. J. G. Carpenter, of Stanford, favored stimulating his patients. He kept them drunk on whisky so as to relax the spasms.

One ounce of bromide of potassium in twenty-four hours had cured many cases.

Dr. J. G. Brooks, of Paducah, reported a case of traumatic tetanus which occurred in his practice while in the Hawaiian Islands. It was a Chinaman who was about to die, and was a case demanding kill or cure treatment, as the man was suffering terribly and begging to be killed. He gave him five grains of morphine hypodermically. The next morning he was awakened by a crowd of Chinamen who announced to him that the man was much improved. Two years later he was still all right.

Dr. J. A. Larrabee, of Louisville, said he had nine cases, four successful, and all children. He thoroughly believed that any case would yield to bromide of potassium provided the remedy was given in sufficient dose. To the educated physician dosage is simply a botheration. He knows the physiological action, and gives for results. The pathology of the disease is unknown.

Dr. Dudley S. Reynolds, of Louisville, was surprised to hear that any one thought the pathology of traumatic tetanus unknown. It was settled at the Second French Congress of Surgery, which met in Paris in 1886, by Prof. Cornil, who presented the streptococcus as the cause, and his demonstration was so perfect that the Congress coincided fully with his belief. This great discovery should not be passed over lightly.

Dr. J. M. Mathews: I believe more is to be gleaned out of the successful cases of te-

tanus reported than by devoting our time to its pathology. He referred to a case of strangulated piles in a condition of gangrene. For several days a patient could not open his mouth, which was an evidence of tetanus. Bromide of potassium in sixty-grain doses was given every two hours. Opisthotonos, muscular pains, and all the symptoms of tetanus were on hand. The patient was kept constantly under the influence of the bromide; for seven days he was given sixty grains every two hours, when the dose was diminished. In three or four weeks he was able to return home.

The Transmissibility of Tuberculosis from the Lower Animals to Man was the subject discussed by Dr. John A. Ouchterlony, of Louisville in a learned and elaborate paper. This question was intimately connected with the infectious character of the disease. The power of the bacillus to resist antiseptics is astonishing. Corrosive sublimate does not destroy the bacillus even at the strength of 1-500. The theory of inheritance has been thoroughly shaken by the discovery of the bacillus. Tuberculosis is rarely if ever congenital, but acquired. If the former theory was true, the prospects of eradication would be remote indeed. If the latter is true, this result may be reasonably looked for. We have clinical proof, also, that the disease is contagious. The object of the paper was to show that tuberculosis could be transmitted from the lower animals to man. There can be no security from tuberculosis so long as tubercular meat and milk are used. The disease is contagious, infectious, and not congenital. It is transmissible especially through the alimentary canal and the respiratory tract. Rabbits kept near tuberculous patients contract the disease in twenty-seven days. Rabbits suspended in cages so as to breathe the air exhaled by tuberculous cattle contract tuberculosis. The lungs are the primary seat of the affection. It may be contracted through the integument, mucous membrane, abraded epidermis, wounded

and abraded surfaces. Tuberculosis in dumb animals is identical with tuberculosis in man. Transmissibility to other species is very frequent. The medical profession should inform the public of the condition of affairs and insist on the control of the meat and milk.

DISCUSSION.	Dr. J. N. McCormack, of Bowling Green, insisted upon the destruction of the sputum of all tuberculosis patients. The State Board has advised that these patients be isolated, and a receptacle for all sputum should contain some destructive agent, or the sputum should be expectorated on paper and burned.
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Dr. J. A. Larrabee, of Louisville, hailed with pleasure any agent that assisted in combatting this disease, stating, however, that we were very liable to accept too rapidly theories that have not been proved. The lung should be developed to its fullest extent by means of gymnastics, or by other exercise. The shallowness of the respiration invites the progress of this disease more than any thing else I know of.

On motion a committee, consisting of Drs. J. N. McCormack, Bowling Green, Dudley S. Reynolds, Louisville, John A. Ouchterlony, Louisville, and Wm. Bailey, Louisville, was appointed to bring this subject before the public.

The Report on Vital Statistics of Kentucky was read by T. B. Greenley, M.D., of West Point.

It was once advised by some philosopher that when we talked we should have something to say, but on the present occasion I am apprehensive I shall, to some extent, violate that injunction.

At our last meeting I was appointed a committee to report on the mortuary and vital statistics of the State but if it was expected that I should base my report on any statistics of that character gathered by the officers of Kentucky within the last decade, the Society will be greatly disappointed.

When I first commenced investigating the matter, I examined the law on the subject in order to learn how and where to find the statistics.

TO BE CONTINUED.

BOHEMIAN PILE DOCTORS.	For some unaccountable reason the domain of rectal surgery is invaded by more pretentious charlatans than falls to the lot of other specialties. In every State, city or town of any size these mountebanks are stationed, and the people are regaled with stories of their wonderful proficiency by the aid of flaming advertisements in the secular press, or hand bills thrown into the door way. Their ranks are filled by men taken indiscriminately from the different trades or avocations without the least knowledge of anatomy, pathology or surgery; yet these men thrive. Armed with a "hypodermic syringe and a bottle of the "proper" mixture, they go forth seeking piles to inject. And why not? Are they not also armed with certificates from leading ministers and endorsements of prominent men? These "specialists" are often the veriest of Bohemians, here to-day and gone to-morrow; but this matters not with the "afflicted." They go in flocks, and are left to count the cost after the departure of the great surgeon (?). A little sober thought, just such as is given to their every day business, would convince the honest, intelligent person that specialists are not made in a day, or out of such material. Apropos to the subject, it would be well to recite the fact that Dr. Andrews, of Chicago, in his excellent little work on "Diseases of the Rectum," has collected statistics showing that out of about 3,000 injections of piles with carbolic acid thirteen deaths have resulted. And yet the profession is accused of <i>persecuting</i> these traveling frauds.
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PROGRESS

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VOL. III. LOUISVILLE, JUNE, 1889. No. 12.

THE LANCET

AT GOTHAM.

At the recent meeting of the Fifth District Branch of the New York State Medical Association Dr. J. G. Truax read a paper on the "Treatment of Acute Lobar Pneumonia." In discussing the subject, "Dr. E. R. Squibb inquired whether Dr. Truax had ever used veratrum viride, the old substitute for venesection, which often accomplished what venesection would in cases where the latter was inappropriate. He also asked whether Dr. Truax knew that he could get antifebrin (the use of which was advised in the paper) for half the money if he bought it under its other name of acetanilidine. The name antifebrin had been patented simply for the purpose of making money.

Dr. S. J. Murray said that by giving veratrum viride in doses of from $\frac{1}{2}$ drop to 2 drops every half hour he had never met with any difficulty in reducing the temperature. He was in the habit of carrying the drug to the extent of producing nausea; when he gave Dover's powder, and afterward stimulus, if it was required. Personally he much preferred veratrum to venesection, and he would certainly give it

a trial in any case before he resorted to bleeding.

Dr. C. S. Wood said that in former years it was often noted that veratrum viride and antimony had a marked effect if they were adminstered after the patient had been bled, but did not exert their appropriate action if given before venesection. He was firmly convinced that, in the class of cases described by Dr. Truax, there was nothing that could compare in efficiency with bleeding."

One naturally wonders, after reading the discussion, how long it must take for Friedlander's discovery of the cause of croupous pneumonia to penetrate the brain of the average New York physician. Doubtless, if the late Dr. Benjamin Rush could rise up and speak, he would say, "verily, the gentlemen have touched the keynote in the therapeusis of pneumonia," and Dr. Eberle might add, "barring the very slight reference to tartrate of antimony."

MISLED.

The American Lancet, of Detroit, has been misled by a recent publication in regard to the attendance at the annual meetings of the Kentucky State Medical Society. The publication alluded to compares the attendance of the Tennessee State Medical Society as superior in numbers to that of the Kentucky Society. The facts are altogether different. At the meeting of the Tennessee State Medical Society last year in Knoxville the entire attendance as published numbered sixty members. At the recent meeting of the Kentucky Society the attendance numbered near two hundred. In the earnest work of the members as exhibited by important practical papers and discussion of scientific subjects. The Kentucky State Medical Society ranks among the best of such organizations in the United States.

PUBLISHERS' DEPARTMENT.

PROGRESS COMPANY. Publishers.

Address all matter relating to this department to the Publishers, 1515 West Chestnut Street.

The Publishers' Department of PROGRESS is designed to afford the Business Editor proper space, in the regular order of our system of classification of the text, for such notices and comments as he may feel inclined to make of meritorious articles, and such items of news as may seem to him best calculated to interest the readers.

No house will, therefore be able to purchase space in this department.

ANNOUNCEMENT.	The readers of PROGRESS are doubtless aware that the publishers' department has been devoted alike to the interests of the manufacturer and the profession.
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Space in this department is no sense to be regarded as advertising space. It has never been held in the same light as that department of other magazines, devoted to what is called reading notices.

It has been the pleasure of both the editor and publisher to observe that announcements of newly discovered or improved devices, published in this department have, from time to time, been widely copied by the best class of exchanges.

With this issue of PROGRESS the old arrangement for its publication ceases. There will, however, appear in the future, a more extended variety of notices in this department. The arrangements are such that we shall be able to announce, in our regular issues, every important discovery in any way relating to the practice of medicine and surgery, mentioning the producer, without regard to his patronage, in our advertising department. This statement is made preliminary to the announcement of the improved facilities for the publication of our magazine.

That PROGRESS is appreciated by the Medical Profession is at once evident from the large number and high character of its

With a rapidly increasing subscription list, and arrangements for even a more extended list of contributors to the next volume, me may be pardoned for saying a word of exultation in the hour of our triumph.

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